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ABSTRACT

This document presents a review of the present functions and programs of each of the colleges in the State Colleges of Massachusetts, the present strengths and needs of the colleges, and the capacity of the colleges individually and severally to adjust and develop, in order to discharge new functions that might be required of them by the future needs of the Commonwealth. The report presents a history of the Massachusetts State Colleges, an overview of the students, faculty, administration, and financial situation of the colleges today, the academic programs offered at the colleges, an inside view of the individual institutions, and a presentation of the functions of each of the institutions. (HS)

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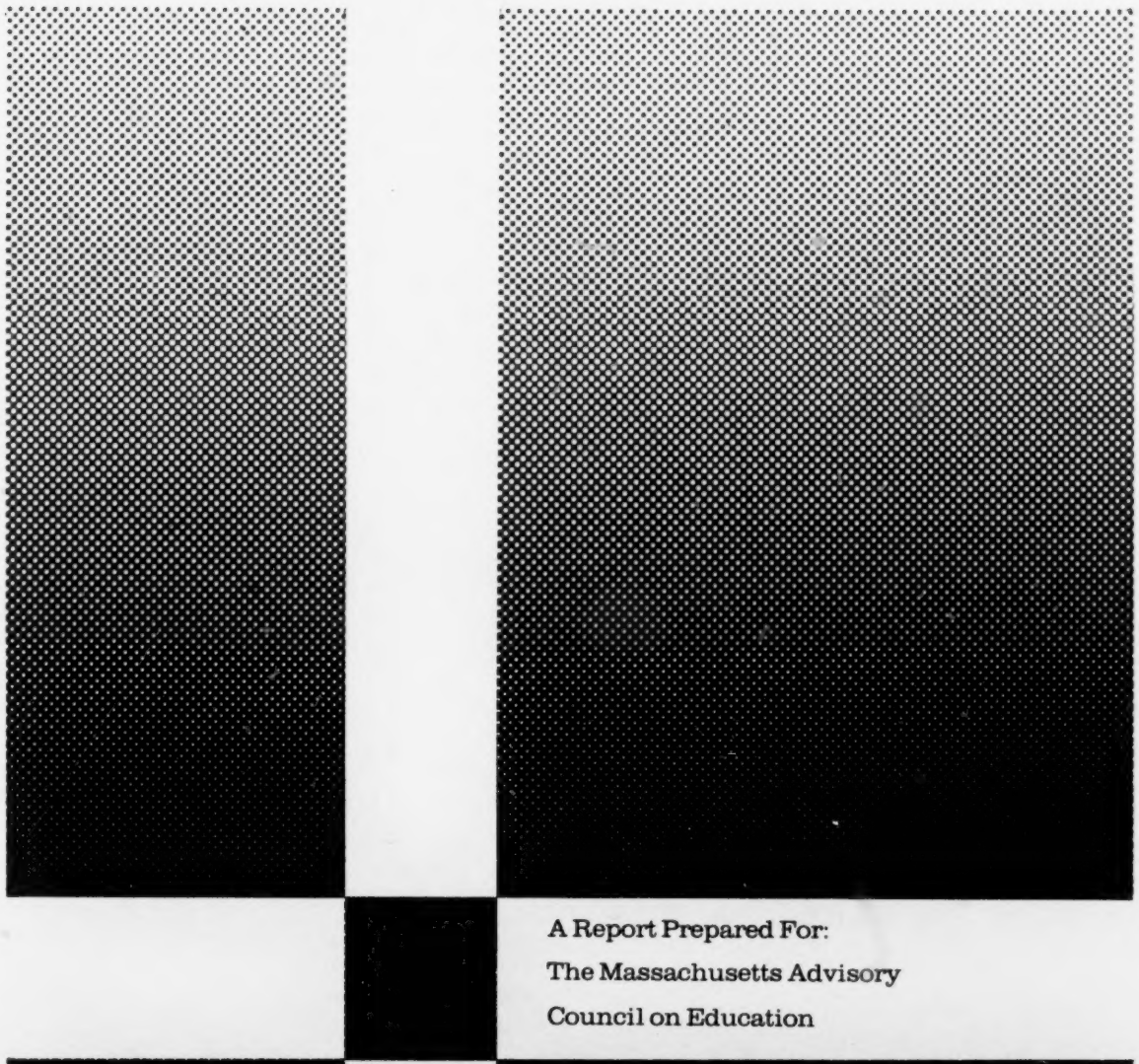

A Report Prepared For:
The Massachusetts Advisory
Council on Education

The People's Colleges

The State Colleges of Massachusetts

Summary of Principal Findings and Recommendations

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THE PEOPLE'S COLLEGES:

THE STATE COLLEGES OF MASSACHUSETTS

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THE STATE COLLEGES OF MASSACHUSETTS

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A REPORT PREPARED FOR

THE MASSACHUSETTS ADVISORY COUNCIL ON EDUCATION

182 TREMONT STREET, BOSTON, MASSACHUSETTS 02111

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PREFACE

Colleges for Forgotten Americans is what Alden Dunhan of the Carnegie Commission on Higher Education named his book describing the state colleges and limited purpose state universities across the nation currently enrolling over a million students. The large proportion of these students come from families of low or moderate income who had not attended college. These students would not otherwise be afforded a college education. Starting in Massachusetts in the 1830's as normal schools, in the early 'twenties state colleges became teachers colleges and then developed into their present not clearly defined form.

Nine of the eleven colleges under the recently established Board of Trustees of State Colleges were originally normal schools; the other two are the College of Art and the Maritime Academy. Because of the early, extensive and superb system of private colleges and universities--Massachusetts is the only state in which more, appreciably more, of its youth are educated in private colleges than in public colleges--the Commonwealth's state colleges have evolved more slowly than in most states. This is also true of its public universities and community colleges.

Our state colleges do share with their fellow colleges in other states an uncertainty and ambivalence of purpose and function. Caught between the rapidly surging universities

on the one hand and the even more rapidly developing community colleges on the other, it is not clear as to just what kind of student and what proportion they should educate in what kind of programs. The late development of Massachusetts state colleges from teachers colleges to general purpose state colleges in a late developing state system of public higher education adds to the confusion. And yet these colleges educate appreciably more than do the state universities and technological institute, and they do it at much less cost per student.

In December 1969 the presidents of the state colleges invited the Director of Research of the Council to explore with them just how the Council might mount a study which would describe accurately the present nature and condition of the eleven state colleges within the context of the other public and private systems to recommend directions in which they should strive and resources they would require. Following further extensive explorations with the presidents and consultations with the Chancellor of the Board of Higher Education and the Provost of the State Colleges System, the Board of Trustees of State Colleges voted in May 1970 to request the Council to undertake a study. In August 1970, the Advisory Council voted to do so.

The Council staff explored many possibilities outside Massachusetts in searching for a director. It found one, uniquely qualified and recently returned to Massachusetts. Dr. Evan Collins, former Harvard and Ohio University dean, had retired in 1969 as President of the State University of

New York at Albany which had evolved from a state teachers college. Dr. Collins is past president of the American Association of Colleges for Teacher Education and has been a member of numerous national commissions and committees in higher education. Currently professor of higher education at Boston College, he is also Director of the Institute for College and University Administration of the American Council on Education.

Dr. Collins has gathered extensive information concerning the colleges from many sources. He used on ten of the campuses the recently standardized Institutional Functioning Inventory of the Educational Testing Service in Princeton. The profiles of the college as expressed by the perceptions of faculties and students and as measured against national norms are disturbing. Morale is generally low; the relatively conservative students do not feel that they have much freedom, and the faculties rank advancement of knowledge, which they do little of, and community service above undergraduate learning which is their chief function to promote. His combined findings reveal state colleges which are growing rapidly but are evolving slowly. Though called state colleges, over eighty percent of their students are enrolled in teacher education programs which are generally traditional in form and moderate in quality.

Yet it is important to note that the faculties of these late developing colleges are working with outmoded forms and traditions under minimal conditions and carrying relatively

heavy loads. They are educating a large portion of the Commonwealth's public college undergraduates and a larger portion of all of our teachers. At least until recently (average faculty salaries compare favorably) they are performing these services at per student costs approximating those in our more affluent high schools well below such costs in our university and in good private institutions; and it is important to know that the large majority of the students they serve are the first generation of their families to go to college.

Dr. Collins does us a favor in clarifying terms and pointing out that these state colleges, where currently three percent of the students are majoring solely in the arts and sciences, should not attempt to evolve into "liberal art colleges." Former teachers colleges in other states have not done so either, though some which have become limited purpose state universities have developed colleges of arts and sciences. Rather Dr. Collins recommends that our state colleges, except for the two specialized ones, concentrate on vastly improving their teacher education programs and the liberal art components which are so essential to general education and to programs preparing academic teachers for our high schools. Then they should accelerate the development of baccalaureate programs in such service areas as health, social welfare, government and recreation.

If this system of colleges which the Board of Higher Education projects will enroll 86,000 undergraduates in 1980

as contrasted with 56,000 in the universities and 84,000 in the community colleges, is to serve the Commonwealth well in clearly defined functions and programs, Dr. Collins emphasizes that the Board of Trustees of State Colleges and its staff must rapidly increase and exercise its planning and coordinating function. It must clarify the mission of the colleges and each college. It must exercise its leadership function in developing a sense of system with each college being a distinctive part within the system. It should encourage specialized programs selectively on the various campuses and the development of consortiums to assure cooperation and wide use of scarce resources. Working with the Board of Higher Education, it must identify student bodies not now being served and develop programs for them.

The state colleges are at present only a system-in-becoming. They need much in leadership for planning and resources. The boards to which the Legislature has assigned governing authority for higher education, the Governor, his new Secretary for Educational Affairs, the Legislature itself and the people to be served--all these must share in responsibilities and efforts so that these colleges may serve the increasing thousands of youth and adults and serve them well in keeping with their need and the quality of life in Massachusetts. On behalf of the Legislature which created it and the Governor who appointed its members, the Advisory Council transmits to those

above and to the faculties and students this important analysis of our state college system.

William C. Gaige
Director of Research
Advisory Council on Education

ACKNOWLEDGMENTS

As is any extensive study, this report is the product of the efforts of many people, whose contributions are gladly acknowledged.

Strong support throughout this study was provided by the Center for Field Research at Boston College, through its resources of skilled consultants and specialized equipment and facilities. Special acknowledgement is due to Professor George Madaus, Dr. Eric Thorsen and Mr. Edward Iwanicki for their assistance in matters of sampling techniques and other statistical procedures. Two graduate student members of the Center, Kongsuk Mantakara and Rev. Oscar Mejia, S.J. developed various resource materials and organized statistical tables. Matthew Quinn of the Center operated at both extremes of the time scale. He did the bulk of the historical chapter and developed the treatment of the projections of teacher supply and demand. Another working paper on the legal aspects of the State Colleges was prepared by Paul Schneiders.

Members of the office of the Chancellor, (Board of Higher Education), and the Provost, (Division of State Colleges), gave important and continuing assistance. The Chancellor, Edward Moore, Deputy Chancellor, Patrick McCarthy, and Karen Melican of this office were most gracious in their assistance. In the office of the Provost, besides Dr. Lawrence Dennis himself, Jana Matthews, John Horrigan and Edward Rossi

gave generously of their experience and made invaluable contribution in assisting the staff.

Chairman John Cataldo and Mrs. Esther Weltman of the Board of Trustees for the state colleges have been most willing to share their time and experience.

At Educational Testing Service both Eldon Park and Nancy Beck, Director and Assistant Director of E.T.S.'s Institutional Research Program for High Education gave both guidance in usage and prompt service in the processing of the I.F.I. questionnaire responses.

The study depended to a large extent on cooperation and assistance at the individual colleges. At all times, at all the colleges, the administration, faculty and students were most gracious and helpful in their consultation with the staff and response to the questionnaire. Further appreciation is noted to those college staff who generously gave their time in administration of the instrument.

The staff frequently had need to research, identify and discuss many aspects of the public nature of the colleges. Lieutenant Governor Donald Dwight kindly gave his assistance. Speaker David Bartley, Representatives Michael Daly and Charles Flaherty were most helpful in their assistance to the staff. Acknowledgment is further made to Paul Marsh of the State Office of Planning and Program Coordination and to Senate President Kevin Harrington.

The special appreciation of all members of the project is expressed to Julian Shlager of the Center staff. He shared fully in the development of the overall design and the ultimate recommendations. He is the sole author of Chapters II and IV. In addition, he served as project coordinator, taking responsibility for all administrative arrangements, including supervision of the administration of the inventory on all the cooperating campuses, and all financial management. Clearly, his was the key contribution that made the study possible.

A particular note of thanks goes to Miss Diane Bryant and Mrs. Glen Schneiders for their patient and skillful secretarial assistance.

The three senior members of the project team, Michael Anello and Donald Donley with the Director, shared in the development of the overall design of the study and in the formulation of the recommendations, as well as taking primary responsibility for special topics: Professor Anello for matters of undergraduate program and curriculum development, and Professor Donley for treatment of graduate and continuing education programs, certain aspects of staffing and financial management.

The director, of course, takes responsibility for any errors of fact or interpretation, as well as for the critical judgments expressed throughout the report.

August, 1971

Evan R. Collins
Project Director

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FOREWORD

PURPOSE AND SCOPE OF THE STUDY

Introduction

This study of the state colleges of the Commonwealth was initiated in the spring of 1970, when the Council of Presidents of the State Colleges requested the Massachusetts Advisory Council on Education to commission a survey of the eleven institutions. This survey, the group suggested, should deal with the present functions of the colleges, individually and as a system, their needs, and their potential functions in the future. In response to this request and in order to clarify the purpose of the project, the Advisory Council held a series of meetings between the director-designate of the project and the committee of the presidents, representatives of national associations, other interested officials, including the Provost of the Massachusetts State College System and the Chancellor of the State's system of higher education, and the full membership of the Advisory Council itself. From these meetings evolved the proposal for the study which was received by the Council in August, 1970; the staff was designated and the members of the Advisory Council for the study appointed in early fall; the first meeting of the staff and study committee was early November, 1970.

Purposes and Scope of the Study

The study was designed to review the present functions and programs of each of the colleges, the present strengths and needs, and the capacity of the colleges individually and severally to adjust and develop, in order to discharge new functions which might be required of them by the future needs of the Commonwealth. It is clear that this study is not a study of the total needs and program for higher education in Massachusetts. The master plan is currently being developed in the Office of the Chancellor, and much assistance and valuable data have been received from the staff of that study. This study, however, has not considered either the system of two-year or community colleges so rapidly emerging in Massachusetts, or the already well-established system of campuses of the University of Massachusetts. Our concern has been confined to the state colleges, although such a study obviously must take into account the significant points of contact with the other two systems. Even within the state college system, the nine former teachers colleges constitute a discrete group, and are often discussed as such in this report. The Massachusetts Maritime Academy and the Massachusetts College of Art, as specialized professional schools, are included in the general discussions, but separated for brief treatment of program and function.

In simplest terms, we have defined for ourselves the purposes of the project as falling under three headings, which thus outline the structure of this report. These three steps or purposes are to:

1. Describe as accurately as possible the state colleges as they are - their population, their programs, their functions, their relationships. Who attends these colleges? Why? What are the characteristics of the faculty? What programs are now offered and what others planned? How do the participants in these programs view themselves and their colleges? This description constitutes the major part of the study, necessary in order to develop the second and third purposes.

2. a. Clarify the functions of the state colleges in order to
   b. identify major impediments to their realization. As has been indicated, the major effort of the fact-finding activities of the study - the analysis of programs, catalog study, campus interviews with faculty and students - has all been addressed primarily to the clarification of function. These functions, as has been noted, have been viewed in the context of the State's system of two-year colleges and its university system.

3. Devise recommendations designed to minimize the impediments, recognizing that such recommendations must be feasible, both economically and politically. Our concern is both to reduce the impediments to present functions and to facilitate new functions.

Procedures

The pursuit of these purposes has involved the study staff in procedures of several sorts. We have, first, commissioned a series of individual studies of special aspects of the problem: the historical review of the colleges, a legal analysis of the statutory framework of authorization and restriction, the operation of the system of financing the colleges, the progress of plans for the physical plant. Some of these studies are included as separate sections of this report; others have been incorporated into other sections, or have served as background material for the study staff.

As a second procedure, an inventory of information and perceptions was administered on each campus, with the assistance and cooperation of the local administration. The instrument, the Institutional Functioning Inventory, was designed to show the presence of factors related to institutional vitality, such as adaptiveness, experimentation, and capacity to absorb innovation. This inventory was supplemented by further questions designed to provide direct information about faculty and

students. Through the use of this instrument, two kinds of information were thus developed.

1. Factual data: the economic background of students; the education and experience of faculty members; numbers of students enrolled, of programs, of faculty publications, and the like.
2. Subjective information indicating how the participants - students, faculty, and administrators - viewed their institution, how they perceived its purposes and its priorities. Our data on the constituent groups allow comparisons on these attitudinal scales between, for example, senior professors and beginning faculty members, or between commuter and resident students.

A third procedure involved staff visits to each of the campuses both by study staff members individually and by a team of three or four members individually assigned to particular aspects of the college and to reviewing these on each campus.

Another procedure called for the review of reports and other materials in the central files, and of materials provided to the study staff by the colleges themselves.

Materials from other studies in this and other states were summarized, including a cross-check of our data with those being developed for the Board of Higher Education. (Acknowledgement is due the staff of those studies for important assistance and continuing cooperation).

Conferences were held with the Chancellor, the Provost, the Director of Research for the Advisory Council, and with various individual members of the Board of State Colleges, the Board of Higher Education, and the General Court. The list of those so consulted is in the acknowledgements.

Through these various procedures, the study has developed information of three types or levels, which this report will attempt to keep distinct and separate. These are, as already indicated:

1. Factual information - such as that about the student body, faculty, buildings, finances, program.
2. Subjective attitudinal information - how students or faculty perceive their college, its procedures and priorities, the views from within the institution.
3. Observations and judgments of non-participants - the study team.

These three components, it is hoped, can be combined to present the accurate description that must serve as the basis for the clarification of functions and the suggestion of measures to enhance their effectiveness.

CHAPTER ONE

HISTORY OF THE MASSACHUSETTS STATE COLLEGES

The history of the Massachusetts state colleges is long, distinctive, and familiar to most readers of this report; it will, therefore, be briefly summarized.

The United States was seventy years young when, on April 20, 1837, the Massachusetts Legislature approved the bill establishing the nation's first State Board of Education. Horace Mann, President of the Senate and a prominent lawyer, surprised all, including himself, when he yielded to the persuasion of Governor Edward Everett and of Edmund Dwight and agreed to become the first Secretary of the Board. Explaining his decision, he later wrote: "The interests of a client are small compared with the interests of the next generation. Let the next generation, then, be my client."

If the next generation were to be his client, however, Mann's contemporaries had to be convinced of the value of free public education. He therefore travelled the State, preaching the doctrine of democracy, urging that the salvation of the nation, as conceived, depended on the rich and the poor being educated together in the common schools.

To stimulate a rebirth of the common schools, however, Mann needed teachers. The academies which everywhere had sprung up after the Revolutionary War had, for all intents and purposes,

served as normal schools for half a century. Nevertheless, a movement in favor of authentic normal schools, or teacher preparation institutions, had been growing slowly but steadily since 1789.

The movement became an experiment when, in 1823, in Concord, Vermont, Rev. Samuel R. Hall opened his school to prepare teachers. Governor Levi Lincoln added prestige to the movement in 1826 in his inaugural address by proposing the establishment of teachers seminaries. Hall brought his experiment to Andover, Massachusetts in 1830, but soon moved it to Plymouth, New Hampshire.

It fell to Rev. Charles Brooks to become something of a missionary of the normal school. On a trip to Europe in the fall of 1834, he visited and studied the German schools, and thereafter seized every opportunity to write and talk about the Prussian system of public education, especially the normal school.

At about this time, a report on the Prussian schools by Victor Cousin of France came into the hands of the educational leaders in Massachusetts. This report had exerted considerable influence in France and had brought about, in 1833, the first national elementary-school system which included thirty schools

for the training of teachers, patterned after the Prussian model. The French called these institutions normal schools (ecoles normales).

The stage was set for Edmund Dwight, a "merchant prince of Boston," and the man who had helped persuade Horace Mann to accept the Secretaryship. Dwight offered $10,000 to Massachusetts to promote the preparation of teachers if the Legislature would match the amount. Both houses accepted almost unanimously. On April 19, 1838, Governor Edward Everett signed the resolution and committed the use of the money entirely to the wisdom of the Board.

So that a majority of Massachusetts citizens could benefit and to prevent normal instruction from becoming a secondary function of an already existing academy, the Board decided to establish three normal schools. On May 30, 1838, in response to a committee from Plymouth County, the Board voted to establish a normal school in whichever town the County would choose, as soon as suitable buildings and means were available. In spite of the urging of Horace Mann, John Quincy Adams, and Daniel Webster, the County could not agree upon a site until March 26, 1840, when it chose Bridgewater. The school opened in the town hall on September 9, 1840.

Lexington, however, had moved more quickly, and July 3, 1839 saw the first state-supported normal school in the nation

open its doors there. Conditions, however, were far from favorable; only three young ladies braved a heavy downpour to present themselves for examination. Five years later, the school moved to West Newton, and in 1853 it took up its present home in Framingham.

The first coeducational normal school in the country began in Barre on September 5, 1839, and moved to Westfield in 1844. In his address at the school's opening, Governor Everett sketched out the curriculum which the Board had agreed upon and which remained the same in all normal schools for the entire nineteenth century with the single addition of the history of education. The course of instruction provided for a "careful review of the branches of knowledge to be taught in our common schools ..." as well as instruction in "the art of teaching ... (and) the important subject of the government of the school ..., that is of exercising such a moral influence in it as is most favorable to the improvement of the pupil ..." The governor noted that there would be established "a common or district school as a school of practice, in which, under the direction of the principal of the school, the young teacher may have the benefit of actual exercise in the business of instruction." The Massachusetts model soon became the standard across the country.

1:4

The first state normal school building was erected at Bridgewater in 1846. At the dedication, Horace Mann described normal schools as "a new instrumentality in the advancement of the race," and doubted that American democracy could

> "long exist to any beneficial and salutary purpose without schools for the training of teachers; for if the character and qualifications of teachers be allowed to degenerate..., an oligarchy of profligate and flagitious men will govern the land ... through the medium and guise of republican forms ...."

Massachusetts established its fourth normal school at Salem in 1854. The fifth opened in Worcester twenty years later. In 1894, the Legislature approved the establishment of four more normal schools: Hyannis (1894); Fitchburg (1895); North Adams (1896); and Lowell (1897).

Through the Industrial Drawing Act of 1870, Massachusetts was the first State to make art a required subject in the public schools. As a direct result, the Massachusetts School of Art, the first public art college in the country, was founded in 1873 to prepare teachers and supervisors of art. The school was integrated into the State College system in 1964, and presently prepares students for teaching as well as for professional careers in the various fields of the visual arts. It is reported to be the only publicly supported arts college in the country.

The Massachusetts Maritime Academy, founded in 1891, is the oldest operating maritime academy in the country. A member of the State College System since 1964, it is a single-purpose institution for the training of officers in the United States Merchant Marine. Previously located on the site of the former Hyannis State Teachers College, it is presently situated at Buzzards Bay with extensive new facilities and a 414 foot training ship. Within the past three years, the Academy has expanded to a four-year program leading to a bachelor of science degree.

In 1944, the Hyannis State Teachers College was closed and in 1952, the Teachers College of the City of Boston (founded in 1852 as a city training school) was transferred by the City to the Commonwealth.

Throughout the nineteenth century and into the first decade of the twentieth, the normal schools had been individualistic, directed by strong personalities who worked out the distinctive features of each school. The expressed policy of the Board of Education in the earlier years had been to select a strong person as principal and to give him the freedom to develop the institution according to his ability, under the general supervision of "visitors."

In 1909, with the reorganization of the Department of Education, the normal schools were grouped into a system under the direct supervision of a Commissioner of Education. The rise

in secondary school enrollment under compulsory attendance created demands for better educated teachers. In response, normal schools developed longer programs of study and enriched their curricula with liberal arts courses. In April, 1932, Governor Joseph B. Ely gave formal recognition and direction to this growth by signing the bill which designated the former normal schools as state teachers colleges. The trend toward the liberal arts increased over the next three decades with the resulting change in name to state colleges in 1960.

Two studies captured the mood of the 'forties and 'fifties and helped pave the way for the new orientation and name. The Report on the Massachusetts State Teachers Colleges appeared in 1954. Its author, Homer W. Anderson, made extensive analyses of and recommendations on students, faculty, and facilities, but considered his most important suggestion to be the formation of a separate Board of Trustees for the state colleges.

The other study, a Report of the Committee to Study General Education in the Massachusetts State Teachers Colleges, appeared in 1959. Published by the Department of Education, it had been almost six years in the making and dramatically demonstrated the burgeoning interest in non-professional subjects at the colleges.

In 1962, the Willis-Harrington Commission (the Massachusetts Education Study Commission) was appointed to develop a master plan for public education. After three years of exhaustive study, the commission reported its findings, and in 1965 the Legislature adopted its main recommendations. A significant change in the structure at the state level was the establishment of three major boards to be responsible for the objectives and needs of Massachusetts public education: the Massachusetts Advisory Council on Education, the Board of Education, and the Board of Higher Education.

The more recent history of these colleges makes clear the pressures upon them to expand enrollment and proliferate programs, with all the problems of faculty, plant, development, and organization entailed in this expansion. The physical expansion of the colleges really started in 1950 when the Legislature began responding to the program of the Board of Education. By 1957 a total of almost twenty million dollars had been appropriated for plant development; in that year the Director of Teacher Education reported "a new high" in the combined enrollments of the ten colleges, excluding the Maritime Academy; the total was 6,700 students, of whom one-third were men. The Director urged an acceleration of physical expansion to permit an enrollment by 1965 of "up to 11,000." That this

projection was not over-enthusiastic is clear in the enrollment figures for the current year, just under twenty-five thousand. Of the graduates of the ten colleges in 1957, eighty-three percent were reported as actually entering teaching. It is interesting that in the current year, eighty-one percent of the upper classmen do plan to teach.

In many other states, the history of the state normal schools which became state teachers colleges shows the teacher education function relegated to a subordinate position as the institutions became state colleges, comprehensive in character, and in some cases regional universities. The colleges of Massachusetts, however, have not followed this road. Their rapid expansion has not resulted in the abandonment or even a recent reduction of their historic function of preparing teachers for the schools of the Commonwealth. Theirs is a consistent history of service in the special field for which Horace Mann urged their establishment.

CHAPTER TWO

THE COLLEGES TODAY

Our first purpose, as we have already indicated, is to describe as accurately as possible the colleges which are the subject of this study - their students, faculty, and administrators; their programs, functions, and relationships as a system. Who attends? Are these the "colleges of the forgotten Americans" as one writer has called them? Do they open the door of opportunity to those for whom the two-year college, the four-year tuition institution, or the state university is not appropriate or available?

A reminder is in order as we seek to answer such questions about the students in the state colleges. Inevitably such enrollment reflects not only the preferences of students and their parents among the choices available to them, but also the element of public policy. The question is not only what opportunities for higher education the State makes available to its youth, but what policy this provision reflects. Is education beyond high school to be available to all students? Is preparation at state expense for particular professions to be reserved for those meeting certain academic standards for admission? For example, a so-called "open admissions" policy is designed to remove both the economic

barrier and the socioeconomic barrier posed by poor schooling and environmental influences, and thus make the opportunity for higher education available to all high school graduates. Nowhere has the policy been totally effectuated; where it has been given its fullest trial (as in the City University of New York), it has resulted in the diversion of the great majority of the less academically qualified students to the two-year institutions. Thus, in effect, an admissions policy differentiated by type of institution has been maintained. California has formalized the differentiated admissions standards for its three types of institutions: two-year college, state college, and the units of the state university. In New York, which subsumes all three types in its state university system, many students not originally admissible to the four-year units use the two years at a community college to qualify for transfer to a four-year unit as juniors.

The question of who attends the state colleges of Massachusetts can be answered quite specifically; the question of the public policy reflected in this condition can only be raised, not answered, in this study. Similarly, the study can describe the obvious attributes of those who teach and administer in the colleges.

Using sampling procedures which are detailed in Appendix A questionnaires were received from a highly representative

sample of administrative officers, faculty, and students at each of the colleges. Information of two types was collected through this procedure. The first, summarized in this chapter, describes certain obvious attributes of the groups of people who constitute the state colleges. The second kind of information, the perceptions these people have of their colleges and their functions, is carried in Chapter IV.

The Students

Responses to the questionnaire were obtained from 1506 juniors and seniors in the system. The response by college is shown in the sample summary sheet (See Appendix C).

a. Resident Status

One of the more difficult items to establish is the resident status of a student. "Dormitory student" and "non-dormitory student" are inadequate classifications when one considers the total lack of housing on some of the campuses and the fact that a number of students are well over 100 miles from their parents' homes. These latter students reside in rented quarters and, in effect, are resident students not on college property. For study purposes it was decided to let students define their status with the following guidelines: commuter,

living with one's family; and resident, living on or near the campus. Using these definitions, 63% of those who responded to the question declared their status as commuter.

A comparison by campus of dormitory space available on each campus yields some interesting information. For example, at three of the colleges that have no dormitory space, as high as 47% of the students regard themselves as residents.

b. Sex

"Nationwide, 60% of the students are men and 40% are women; in state colleges, the figures are 53% and 47%; reflecting the strong feminine tradition of the institutions."[1] Our response group was preponderantly female; women accounted for 69% of those who answered this question (1384 total). The strong female bias is caused by the over-response of residents, the majority of whom are female. The data are therefore analyzed with this response bias in mind and compensation is made where it strongly affects the response meaning.

c. Transfer Status

Many of the arguments leveled at institutions that train teachers at public expense are based on the objection that

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[1]Dunham, E. Alden, Colleges of the Forgotten Americans, New York: McGraw-Hill, 1968, p. 83.

while the state subsidizes the student's education, the student may move away taking with him his publicly financed expertise. To determine to what extent this problem exists, and to be able to analyze the make-up and genesis of the student constituency, an extensive question on transfer status was developed. The results are shown in Table 2-1. Generally, more males (59.8%) than females (40.2%) have stayed at the same college at least three years.

The percentage of juniors and seniors who began their college careers at the state college they now attend range from 55.6% to 81.9%. This would seem to indicate that the different colleges are really being used in different ways. Lowell and Westfield are recruiting and keeping a type of student who, in their particular program, tends to persist for a relatively long period. Boston State, however, seems to function with a different philosophy; about half of the upper classes are transfers from other higher education institutions. Here the state colleges are reflecting the national scene: the "open" concept, of students moving in and out of school for life, is operating concurrently with the concept that bachelor degree studies should be limited to an immediate post-high school period and should be successfully completed in four years.

When transfer status was compared across the major areas of study to determine if there were any particular discipline that contributed inordinately to the variation of figures, it was found that all areas of study contributed about equally to the transfer situation. There was some evidence that students majoring in biology and the fine and performing arts (83.3% and 85.7% respectively), began and finished their careers at the same colleges more often than those majoring in business (71.9%); the range over the system, however, was not great.

The data also reveal some differences among the colleges that imply variations in policy within the system. Transfers from the various community colleges in Massachusetts represent only .7% of the upperclass group on one campus (Lowell), and 19.7% on another (North Adams). At least one college, Boston State, at present has the same policy and relation to the community colleges as the University of Massachusetts; they have stated that they will accept any graduate from the academic program whom the community college recommends. How this will affect the enrollment profile in future years is unknown.

Another 2.9% of the students have transferred into the state college system from Massachusetts private two-year colleges. Here again, there is substantial variation among the colleges. At Framingham, the percentage (4.8%) is more than

nine times that at Bridgewater where transfer students represent .5% on The Campus.

A total of 12.5% of all junior and senior respondents came from two-year colleges and all but .6% of these were from public or private colleges in Massachusetts.

Another large input comes from transfers from four-year colleges. Five percent of the students had transferred to the state college system from some other four-year college in Massachusetts; the range was from 13.7% of the students at Framingham to 2.4% of the students at North Adams.

Out-of-state four-year colleges accounted for another 3.1% of upper classmen as transfers to the system. At Framingham 8.9% of the students were in this category, while Westfield and Bridgewater respectively had 1.5% and 1.6% of their juniors and seniors from out of state four-year colleges.

Summary of Transfer Status

The chance that a senior student has spent three years at his present college varies considerably from college to college - from roughly one in two to four in five. It is speculated that a combination of distinctive programs, administrative policy, and geography contributes to the variation.

Approximately one upperclassman in seven is a transfer into the system; this varies by campus from more than one in 3.5 to less than one in 16. Overall, some 12% of the upperclassmen come from two-year colleges in Massachusetts and another 5% from Massachusetts four-year colleges. At Framingham, however, an upperclassman is five times more likely to be a transfer student than his counterpart at, say, Lowell; the chance that he or she will be a transfer from a private four-year college in Massachusetts is fifteen times as great. Again, this wide variation by campus is seen as the reflection of college policy as well as geographic location.

One clear implication of the transfer situation is that policy or curriculum change in the state colleges must take into consideration the 30% of the student body who did not start their college career in a state college.

d. Socio-Economic Level

"In a word--they are the sons and daughters of the 'Forgotten Americans', the phrase coined by President Nixon..."[2]

To learn what constituency was using the state colleges, an assessment of the socio-economic status of the students was attempted. Rather than create a new definition, it was decided to use the questions defined and normed by Educational

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[2]Dunham, E. Alden, op. cit. p. 83.

TABLE 2-1

UPPERCLASS TRANSFER STATUS

	System		Boston		Bridge-water		Fitch-burg		Framing-ham		Lowell		North Adams		Salem		West-field		Worcester	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Began College Career at:																				
1. This State College -	1016	57.5	114	55.6	131	68.2	51	63.7	102	60.4	118	81.9	86	67.7	122	66.3	166	81.4	126	62.4
2. Mass. Com. College -	136	9.0	17	8.3	18	9.4	8	10.0	10	6.0	1	0.7	25	19.7	24	13.0	19	9.3	14	6.9
3. Other State Community College -	2	0.1	1	0.5	0	0	0	0	0	0	0	0	1	0.8	0	0	0	0	0	0
4. Mass. 2 year Private -	43	2.9	6	2.9	1	0.5	6	7.5	8	4.8	2	1.4	1	0.8	5	2.7	2	1.0	12	5.9
5. Other State 2 year Private -	8	0.5	1	0.5	1	0.5	1	1.2	3	1.8	0	0	0	0	1	0.5	0	0	1	0.5
6. Mass. 4 year College -	76	5.0	14	6.8	9	4.7	4	5.0	23	13.7	4	2.8	3	2.4	7	3.8	5	2.5	7	3.5
7. Other State 4 year College -	46	3.1	4	2.0	3	1.6	1	1.2	15	8.9	4	2.8	6	4.7	4	2.2	3	1.5	6	3.0
8. Other -	18	1.2	2	1.0	2	1.0	1	1.2	1	0.6	3	2.1	2	1.6	1	0.5	4	2.0	2	1.0
9. Non respondent -	161	10.7	46	22.5	27	14.1	8	10.0	6	3.6	12	8.3	3	2.4	20	10.9	5	2.5	34	16.8

Testing Services in their College Student Questionnaire, an instrument that is widely used at all types of institutions across the nation.

These questions isolated the factor of status in four ways. The basic question, which is weighted at three times the level of the other, in developing a single index of socio-economic status, involves the father's occupation. The other three, which act as supportive questions, involve family income for the last year, and the level of mother's and father's formal education. Tables illustrating the responses are contained at the end of the section.

1. Father's Occupation

The question was answered by 1368 students. For the system as a whole the occupation fell between the service worker (defined as policeman, fireman, barber, military non-commissioned officer, and so forth), and skilled worker or craftsman (defined as carpenter, electrician, and plumber). Only some 6% of all respondents were in the lower category of Father's Occupation described as unskilled worker, laborer, and farm worker. A similar 6% appeared in the highest levels, described as owner or high level executive, and professional requiring an advanced degree. Thus, at least in terms of Father's Occupation, the students represent blue collar backgrounds.

When we look across the various colleges, there is some differential among them, although the range is not great. Perhaps the greatest level of variation is found at Framingham, where the average level of Father's Occupation is slightly higher, closer to salesman, bookkeeper, secretary, office worker. At Bridgewater the average level of occupation was much closer to the service worker category, but the range of variation was small and it firmly established the Father's Occupation of the students at the state colleges fall well within the definition of the blue collar worker. Both Westfield and Framingham show between 9.3% and 10.7% in the highest category levels. It is unclear whether this is a statistical oddity or an indication of a trend. North Adams distinctly shows the heaviest grouping with some 36.2% falling in the lowest classification of Father's Occupation, and with 0% in the highest class. This may well be due to its isolated location and the rather depressed economic conditions in that particular area.

2. Parental Family Income

Across the system as a whole the students viewed the total income of their parental family as falling just over $8,000

for the year. The wording of the question would include mother's and father's income because it deals with the total family income. The tendency is for the family income to follow directly and to tie in closely with the question on father's occupation. For example, Framingham shows a family income much closer to the $9,000 range, while the lowest income shows up at Boston State, Worcester State, and Salem State. North Adams surprisingly shows a higher income than its Father's Occupation figures might have led one to suspect.

3. Father's Formal Education

On the average, those juniors and seniors who responded to the questionnaire described their father's formal education as somewhat more than "finished high school." This group represented some 31% of all respondents. About 4% had Father's Educational Level at "no formal schooling" or "some grade school only." At the other extreme was another 4% who enjoyed graduate or professional degree status. Less than 12% of all students had parents who had finished college or gone beyond that level.

The highest educational level was found at Framingham where it came much closer to being business or trade school rather than just high school. The lowest was at Boston State where

the education level fell somewhere between "some high school" and "finished high school." The differences among all the colleges, however, were not great.

4. Mother's Formal Education

The education level of the mothers, "some high school," was somewhat less than that of the fathers. The three schools that show the highest level on this scale were Framingham, Salem, and Westfield. As with the prior question, there was no really significant differences among the schools.

Summary: Socioeconomic Status

When the four questions involving socioeconomic status--Father's Occupation weighted at three, Parental Family Income, and Father's and Mother's Formal Education--are put together in a composite score, we find that the system averages an index of 26.06. When the chart showing the scales for institutions grouped by type is examined, we find that this index for the nine Massachusetts colleges coincides almost exactly with the national mean index of 25.56 for the public colleges.

We have thus established that the socioeconomic class of the student constituency using the Massachusetts state colleges is predominantly blue collar and does coincide almost exactly with those constituencies across the country that are using other public college systems. It should be further noted that

this constituancy is the lowest socioeconomic grouping in any of the types of institutions surveyed by the College Student Questionnaire, and from this it is perhaps safe to assume that the constituencies are using these different types of institutions for different purposes.

Maritime Academy

The classes have to run about 110 freshmen, 80 sophomores, 60 juniors and now for the first time some 60 seniors. The Academy, because of its special nature, has over 10% of its enrollment from out of state, much higher than the other colleges in the system.

Some 116 students responded to the questionnaire. About 50% of them define their major as the physical sciences while the rest see their area of study as engineering.

The socioeconomic status of these students falls in a somewhat narrower range than the students' at the nine academic colleges. Father's occupation is at least skilled worker, but less than 3% of the students had father's occupation in the unskilled or semi-skilled category. From information obtained at the Academy, it was learned the occupation of maritime officers is one that tends to stay in a family. This was borne out by the 22% who classify father's occupation as that which includes governmental official or military officer.

The mean family income, approximately $9,600, is about $1,500 more than that at the academic colleges. Both mother's and father's education is beyond high school, approaching a business or trade school level.

When these factors are combined into a composite socio-economic index, it does not fall far above that at the other colleges (29.22 versus 26.06). This close match derives mostly from the relative absence of low and high end students at the Academy compared with the wider range at the other colleges.

Massachusetts College of Art

Of the approximately 800 students, 35% are male. Thirty-nine percent presently live in apartments near the school. About one-third of the degrees granted are in education. The remainder are Bachelor of Fine Arts degrees.

Acceptance into the college is based on past academic performance as well as on a student's portfolio. The portfolio is a representative sample of a student's pre-professional work. The combination of academic and artistic professional standards has resulted in an application-to-acceptance ratio of 6 to 1. There has been some discussion concerning a mid-certificate level, a type of diploma that would allow artistically talented, but non-academically oriented students to benefit from the college.

The College of Art is unique among the state colleges and for that matter among most private institutions, in having undertaken an extensive attitudinal and demographic study of the students. The study was done in 1970 by David McGavern, Dean of Students at the Massachusetts College of Arts, and by Dober, Paddock, Upton and Associates, Inc. The information parallels the type of data gathered by the IFI and with the college's permission, was used for the present study.

The students are somewhat older than those at the other state colleges. Interviews with randomly chosen students showed that all of this group had finished high school and worked in a job close to the field in which they were majoring before deciding to enroll.

The level of father's occupation, which ranges well within skilled worker to professional status, as well as the income range of these students' families, are somewhat higher than at the other colleges. To finance their education, however, almost 60% of the students hold a paying job while attending school.

f. Summary: Students

The sample included an appropriate number of students from the junior and senior classes. The students were generally pursuing studies in the social sciences, the humanities, and

education. The socio-economic profile revealed that the father's occupation fell somewhere between a service worker and a skilled worker, that the annual family income was about $8,100, that the father's education was somewhat more than high school, and that the mother's education was somewhat less. The family socio-economic status of students attending the nine academic colleges, therefore, is almost identical with the mean for all public colleges throughout the country.

When we examine the transfer status of the juniors and seniors at the nine Massachusetts colleges, we find considerable variation. On some campuses, about 50% of the students have arrived there some time after their freshman year. On other campuses, less than 10% of the student body have transferred to the college. This may have something to do with the special programs or the desirability of the college as seen by outsiders. The students at the Massachusetts State Colleges, then, are generally first generation college-goers and their goal is some kind of vocational certification.

TABLE 2-2

WHICH OF THE FOLLOWING CATEGORIES COMES CLOSEST TO YOUR FATHER'S OCCUPATION? IF YOUR FATHER IS RETIRED, DECEASED, OR UNEMPLOYED, INDICATE HIS FORMER OR CUSTOMARY OCCUPATION. (MARK ONLY ONE)*

	System		Boston		Bridge-water		Fitch-burg		Framing-ham		Lowell		North Adams		Salem		West-field		Worcester	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1. Unskilled worker, laborer, farm worker	84	.06	11	5.4	10	5.2	5	6.2	6	3.6	7	4.9	9	7.1	9	4.9	5	2.5	43	2.9
2. Semiskilled worker (e.g. machine operator)	249	.18	24	11.7	28	14.6	15	18.8	6	3.6	30	20.8	37	29.1	29	15.8	11	5.4	95	6.3
3. Service worker (policeman, fireman, barber, military noncommissioned officer, etc.)	198	.14	39	19.0	11	5.7	13	16.2	29	17.3	27	18.8	13	10.2	28	15.2	51	25.0	159	10.6
4. Skilled worker or craftsman (carpenter, electrician, plumber, etc.)	262	.19	29	14.1	41	21.4	15	18.8	48	28.6	24	16.7	22	17.3	28	15.2	58	28.4	264	17.5
5. Salesman, bookkeeper, secretary, office worker, etc.	160	.12	16	7.8	26	13.5	7	8.7	16	9.5	20	13.9	13	10.2	23	12.5	14	6.9	419	27.8
6. Owner, manager, partner of a small business; lower level governmental official, military commissioned officer	223	.16	26	12.7	26	13.5	9	11.2	24	14.3	15	10.4	19	15.0	28	15.2	33	16.2	238	15.8
7. Profession requiring a bachelor's degree (engineer, elementary or secondary teacher, etc.)	111	.08	12	5.9	12	6.2	9	11.2	16	9.5	4	2.8	7	5.5	15	8.2	9	4.4	71	4.7
8. Owner, high-level executive - large business or high level government agency	41	.03	5	2.4	6	3.1	2	2.5	6	3.6	4	2.8	4	3.1	4	2.2	9	4.4	22	1.5
9. Professional requiring an advanced degree (doctor, lawyer, college professor, etc.)	40	.03	4	2.0	5	2.6	1	1.2	12	7.1	4	2.8	0	0	6	3.3	10	4.9	19	1.3
10. Non respondent	138		39	19.0	27	14.1	4	5.0	5	3.0	9	6.2	3	2.4	14	7.6	4	2.0	176	11.7
Mean category level	3.87		3.89		3.36		4.16		4.88		3.89		3.7		4.01		4.37		4.07	

*From the College Student Questionnaire by Educational Testing Service, Princeton, New Jersey

TABLE 2-3

WHAT IS YOUR BEST ESTIMATE OF THE TOTAL INCOME LAST YEAR OF YOUR PARENTAL FAMILY (NOT YOUR OWN FAMILY IF YOU ARE MARRIED)? CONSIDER ANNUAL INCOME FROM ALL SOURCES BEFORE TAXES.*

	System		Boston		Bridge-water		Fitch-burg		Framing-ham		Lowell		North Adams		Salem		West-field		Worcester	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1. Less than $4,000	43	.03	7	.04	7	.04	3	.04	3	.02	4	.03	4	.03	3	.02	5	.03	7	.04
2. $4,000 to $5,999	95	.07	10	.06	11	.07	6	.08	6	.04	11	.08	11	.09	15	.09	14	.07	11	.07
3. $6,000 to $7,999	159	.12	16	.10	13	.08	8	.11	11	.07	25	.19	16	.13	17	.10	20	.10	33	.20
4. $8,000 to $9,999	264	.20	27	.17	32	.19	18	.24	29	.19	34	.26	28	.23	25	.15	38	.19	33	.20
5. $10,000 to $13,999	419	.32	56	.35	66	.40	24	.32	33	.21	39	.29	35	.29	54	.33	67	.34	45	.28
6. $14,000 to $19,999	238	.18	38	.24	24	.14	13	.17	43	.28	14	.11	18	.15	35	.21	32	.16	21	.13
7. $20,000 to $25,999	71	.05	3	.02	8	.05	1	.01	14	.09	5	.04	5	.04	12	.07	16	.08	7	.04
8. $26,000 to $31,999	22	.02	2	.01	4	.02	1	.01	9	.06	0	0	1	.01	3	.02	1	.01	1	.01
9. Over $32,000	19	.01	0	0	1	.01	1	.01	7	.05	1	.01	2	.02	1	.01	3	.02	3	.02
10. Non respondent	176		46		26		5		13		11		7		19		8		41	
Mean category level	4.07		3.55		3.99		4.16		4.88		3.89		4.17		4.24		4.50		3.44	

*From the College Student Questionnaire by Educational Testing Service, Princeton, New Jersey

TABLE 2·4

HOW MUCH FORMAL EDUCATION DOES (DID) YOUR FATHER HAVE? INDICATE ONLY THE HIGHEST LEVEL (I.E. MARK ONLY ONE OF THE NINE ALTERNATIVES.)*

	System N	%	Boston N	%	Bridge-water N	%	Fitch-burg N	%	Framing-ham N	%	Lowell N	%	North Adams N	%	Salem N	%	West-field N	%	Worcester N	%
1. No formal schooling or some grade school only	57	.04	10	.06	6	.04	4	.06	6	.04	8	.06	4	.03	5	.03	5	.03	9	.05
2. Finished grade school	99	.07	14	.08	10	.06	6	.08	6	.04	14	.10	12	.10	11	.06	11	.06	15	.09
3. Some high (secondary) school	260	.19	28	.17	36	.22	13	.18	29	.18	21	.16	29	.23	19	.11	51	.26	34	.20
4. Finished high school	421	.31	62	.37	44	.27	22	.31	48	.29	47	.35	42	.34	60	.35	58	.29	38	.23
5. Business or trade school	126	.09	7	.04	21	.13	6	.08	16	.10	11	.08	9	.07	23	.13	14	.07	19	.11
6. Some college	223	.16	21	.13	27	.16	15	.21	24	.15	22	.16	20	.16	31	.18	33	.17	30	.18
7. Finished college (four years)	88	.06	17	.10	7	.04	5	.07	16	.10	7	.05	5	.04	10	.06	9	.05	12	.07
8. Attended graduate or professional school (e.g. law or medical school) but didn't attain a graduate or professional degree	32	.02	4	.02	6	.04	0	0	6	.04	1	.01	0	0	3	.02	9	.05	3	.02
9. Attained a graduate or professional degree (e.g. MA, PhD, MD)	58	.04	4	.02	8	.05	1	.01	12	.07	3	.02	4	.03	9	.05	10	.05	7	.04
10. Non respondent	142		38		27		8		5		10		2		13		4		35	
Mean category level	4.04		3.50		3.89		3.84		4.70		3.87		4.09		4.35		4.44		3.66	

*From the College Student Questionnaire by Educational Testing Service, Princeton, New Jersey

TABLE 2-5

INDICATE THE EXTENT OF YOUR MOTHER'S FORMAL EDUCATION. USE THE ALTERNATIVES IN THE PRECEDING QUESTION. (MARK ONLY ONE)*

	System		Boston		Bridge-water		Fitch-burg		Framing-ham		Lowell		North Adams		Salem		West-field		Worcester	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1. No formal schooling or some grade school only	40	.03	4	.02	7	.04	3	.04	4	.02	4	.03	5	.04	2	.01	6	.03	5	.03
2. Finished grade school	74	.05	5	.93	7	.04	3	.04	5	.03	15	.11	11	.09	10	.06	8	.04	10	.06
3. Some high (secondary) school	193	.14	28	.17	25	.15	19	.26	17	.10	21	.16	18	.15	15	.09	22	.11	28	.17
4. Finished high school	649	.48	90	.54	78	.48	31	.43	69	.42	62	.46	64	.52	91	.53	106	.53	58	.35
5. Business or trade school	164	.12	20	.12	18	.11	5	.07	22	.13	15	.11	12	.10	22	.13	19	.09	31	.19
6. Some college	116	.09	7	.04	16	.10	7	.10	20	.12	9	.07	7	.06	15	.09	21	.10	14	.08
7. Finished college (four years)	75	.06	8	.05	8	.05	3	.04	16	.10	5	.04	3	.02	9	.05	13	.06	10	.06
8. Attended graduate or professional school (e.g. law or medical school) but did not attain a graduate or professional degree	24	.02	1	.01	3	.02	1	.01	2	.01	0	0	3	.02	5	.03	3	.01	6	.04
9. Attained a graduate or professional degree (e.g. MA, PhD, MD)	28	.02	3	.02	2	.01	0	0	8	.05	3	.02	1	.01	3	.02	3	.01	5	.03
10. Non respondent	143		39		28		8		5		10		3		12		3		35	
Mean category level		3.88		3.37		3.60		3.57		4.59		3.72		3.88		4.14		4.29		3.68

*From the College Student Questionnaire by Educational Testing Service, Princeton, New Jersey

TABLE 2-6

SOCIOECONOMIC STATUS-COMPOSITE SCORES - STUDENTS

	System		Boston		Bridge-water		Fitch-burg		Framing-ham		Lowell		North Adams		Salem		West-field		Worcester	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Composite Socioeconomic Index:																				
0-9	16	.01	1	.01	2	.01	1	.01	2	.01	0	0	1	.01	1	.01	5	.03	3	.02
10-19	310	.24	34	.22	35	.22	19	.27	24	.16	46	.35	44	.37	31	.19	35	.18	42	.26
20-29	569	.94	76	.48	69	.43	33	.46	53	.34	60	.45	46	.39	76	.47	84	.43	72	.45
30-39	303	.23	34	.22	39	.24	13	.18	52	.34	18	.14	21	.18	39	.24	57	.29	30	.19
40-49	101	.08	12	.08	15	.09	5	.07	19	.12	5	.04	6	.05	16	.10	11	.06	12	.08
50+	9	.01	0	0	0	0	0	0	4	.03	3	.02	0	0	0	0	2	.01	0	0
Mean	26	.06	25	.62	26	.39	24	.75	29	.31	24	.04	23	.73	26	.99	26	.57	25	.45

TABLE 2-7

COMPARATIVE SOCIOECONOMIC STATUS
AT DIFFERENT TYPES
OF INSTITUTIONS

	Mean of Means	S.D. of Means
All Institutions	31.08	5.74
Universities (Public and Private)	32.36	4.18
Public Colleges	25.56	4.18
Independent Colleges	35.60	6.30
Roman Catholic Colleges	30.40	3.96
Protestant Denominational Colleges	31.93	4.59
Nine Massachusetts State Colleges	26.06	8.81

Source: College Student Questionnaires, Institutional Research Program for Higher Education, Educational Testing Service, Revised 1971.

The Faculty

Of the 1,861 faculty positions in the Massachusetts State College System, responses were received from 941, a 51% response level.

TABLE 2-8

FIELD OF TEACHING COMPARED WITH FIELD OF HIGHEST DEGREE

	Major Field		Field of Highest Degree	
	N	%	N	%
Biological Sciences	64	6.8	69	7.3
Physical Sciences	55	5.8	46	4.9
Mathematics	65	6.9	50	5.3
Social Sciences	162	17.2	140	14.9
Humanities	194	20.6	189	20.1
Fine Perf. Arts	69	7.3	49	5.2
Education	198	21.0	245	26.0
Business	15	1.6	10	1.1
Other and Non respondents	142	15.1	143	15.2

Education, social sciences and the humanities together represent 58.8% of major teaching areas and 61% of the highest degrees. Of those who hold their highest degree in education, only 75% teach in education. The remaining

education degree holders teach in the following fields: 7% in the social sciences, 4% in the physical sciences, 4% in mathematics, 3% in the humanities and almost 5% in the fine and performing arts. The remaining 2% are distributed to business or other areas.

In contrast, 86% with highest degrees in biology and science teach in their field; the figures for other areas are: 89% in physical sciences; 98% in mathematics; 98% in social science; 94% in humanities; 89% in fine and performing arts; and 90% in business.

More than a quarter of the faculty respondents, therefore, hold their highest degree in education. Not all teach in this field, however, The percent teaching in other areas ranges from 4% in the humanities to 16% in biology and 16% in the fine and performing arts. In other words, of the 55 respondents who teach biology, 11 have their highest degree in education.

b. Rank, Age, Sex, and Years on the Faculty

Rank distributions of faculty in the state colleges are in general controlled by a policy[3] which makes the following provisions:

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[3] Basis of Staffing Recommendations for the Higher Educational Institutions of the Commonwealth.

Professor - 25% of faculty (based on a 16:1 student-faculty ratio for the state colleges).

Associate Professor - 45% of total faculty based on enrollment less 25% of professor class.

Assistant Professor - 75% of total faculty based on enrollment less the 45% Professor and Associate Professor classes.

Instructor - 25% of total faculty based on enrollment.

This policy corresponds closely to the actual distribution by rank in the four-year colleges of the United States. In practice, however, the appointments actually made do not fully utilize these positions.

TABLE 2-9

FACULTY DISTRIBUTION BY RANK
FALL 1970

	All U.S. Four Year Colleges		Massachusetts State Colleges		
	M	F	M	F	Total
Professor	22.0%	11.2%	16.1%	9.2%	14%
Associate Professor	23.3	17.1	23.9	14.3	21
Assistant Professor	30.8	31.6	40.4	32.0	38
Instructor	15.8	29.6	19.6	44.5	27
Other	8.0	10.4			

Source: A Fact Book on Higher Education, Third Issue, 1970, American Council on Education, Washington, D.C. (subsequently referred to as ACE - Fact Book - 1970.)

The age distributions of the Massachusetts respondents and the national distribution are shown in the following chart.

TABLE 2-10

AGE DISTRIBUTION OF FACULTY

Massachusetts							National*	
	M		F		Total		M	F
	N	%	N	%	N	%	%	%
IFI Categories							ACE Categories	
Under 30	79	16	60	21	148	17	Under 30	16.7 18.1
							31-35	18.4 12.8
30-39	201	40	98	34	323	37	36-40	16.4 14.5
40-49	153	31	61	21	234	27	41-50	25.6 26.4
50-59	58	12	56	19	127	15	51-60	15.0 17.7
60+	10	2	17	6	38	04	Over 60	7.9 10.4
	501	100%	292	100%	*870	100%		

*Source: ACE Fact Book - 1970

The Massachusetts state college faculty, then, follow rather closely the national faculty age distribution, but with considerably lower percentages in both male and female the over 60 category.

When the faculty respondents are viewed from the point of view of the number of years of service on the faculty of the state college at which they are now teaching, the following distribution results.

*501 + 292 does not equal 870 total; the difference represents those who did not respond as male or female.

TABLE 2-11

LENGTH OF SERVICE AT PRESENT COLLEGE

Years on this faculty	N	%
1	153	16.3
1-2 years	142	15.1
3-6 years	337	35.8
7-12 years	135	14.3
12+	117	12.4

This seems to demonstrate rather dramatically the recent expansion of the system, since 31.4% of the faculty have been at their present college less than 3 years. This same factor may also help to explain the somewhat heavier distribution into the lower academic ranks noted in the prior section.

c. Degree from a State College

The extent of inbreeding, or that rate to which colleges hire those who have come through their own program, is often used as an inverse measure of institutional quality or a measure of their ability to attract qualified outsiders.[4]

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[4]Dunham, op. cit., p. 102.

("Catalogs of many state colleges reveal a great deal of post inbreeding-faculty members with undergraduate degrees or masters degrees, sometimes both, from the institution in which they are teaching.") Dunham goes on to suggest that as institutions improve this condition may change.

TABLE 2-12

FACULTY HOLDING DEGREE FROM MASSACHUSETTS STATE COLLEGES

	N	% of Total	% of Respondents
Yes	217	23.1	26%
No	629	66.5	74%
Total respondents	846		100%
Nonrespondent	98	10.4	
Total	944	100%	

The figures show that 26% of respondents hold some degree from a state college in Massachusetts. A catalog survey showed that 252 of the 1542 faculty listed not only held a degree from a state college but had at least one degree from the college at which they were presently teaching. This represents 16% of the total faculty. Among the colleges the range on this factor was from 8% to 35%, giving evidence of different college policies.

The distribution by academic rank of those who hold some degree from a state college is:

Instructor	27.6%
Assistant Professor	34.8%
Associate Professor	22.9%
Professor	14.8%

These figures seem to show a dispersal throughout the system, heavier in the lower academic ranks.

d. Publications

It is difficult to determine quality of publication, as any promotion committee will agree. This item, therefore, was limited to a count of publications with one attempt at measurement to determine whether the publications dealt with the content of the discipline or with the method of teaching.

TABLE 2-13

NUMBER OF BOOKS OR ARTICLES PUBLISHED BY FACULTY IN PAST THREE YEARS

Number of Publications	N	%
1. 0-2	711	75.6
2. 3-5	82	8.7
3. 6-10	29	3.1
4. 11-15	6	.6
5. Over 15	7	.7
6. Nonrespondent	106	11.3

Given 75.6% of the respondent faculty as basically non-publishing, the attempt at quality measure showed only 38.2% of their publications to be in the content rather than in the teaching of the discipline. The variation by campus on the matter of publication was small.

e. Teaching Duties

Faculty are assumed to teach four courses or 12 credits

in the system yet the response ran as follows.

TABLE 2-14

TEACHING LOAD

	N	%
1. Three or fewer credit hours	29	3.1
2. Four to six	54	5.7
3. Seven to nine	81	8.6
4. Ten to 12	560	59.5
5. 13 or more credit hours	114	12.1
6. Nonrespondent	103	10.9

Perhaps part of the variance on the lower side of 12 hours may be explained by the 5% of faculty who teach 4 or more hours in the evening program, a figure not represented in this distribution. Another part of the hours lower than 12 may be explained by the necessity of bootlegging administrative positions from faculty positions.

Much more significant are the 12+% of the respondent faculty who are teaching 13 or more credit hours, a load generally considered more suitable to 2-year colleges where a 15 hour load is the standard.

In general, 75% of the faculty have their largest class under 50, while only 4% teach classes larger than 100. Some 60% of the faculty have their smallest class under 20 students in size.

There is an even spread of the faculty ranks across the classes of students. Thus, a freshman has as much chance of being taught by a full professor as by an instructor.

f. Maritime Academy

The faculty composition inasmuch as it can be categorized, is as follows: some 36% are engineers, 14% are in the physical sciences, another 14% are in the social sciences, and 7% are in the humanities plus the remainder in other areas. The weighting in the social sciences and humanities suggests liberalizing attempts within the new four-year curriculum. The data indicate that faculty are teaching in the field of their highest degree.

The faculty teach the 9 to 12 hour load, as is normal in the system, with no overload for extension or evening courses. They tend to be slightly older than the academic college faculties, but only 36% have been at the institution 7 to 12 years. This suggests a career pattern which involves a number of years of professional experience before entering teaching. Their academic ranks are clustered in the assistant, associate professor range with very few instructors and full professors.

Over half of the responding faculty hold a degree from a Massachusetts state college, probably the one at which they are presently teaching.

g. Administrators

The type of information gathered on administrators was limited in scope compared with that gathered on the faculty and student body. Information was obtained on the age distributions, the distributions of males and females, and the type of administrative duties. Again, the technique of having people classify themselves as administrators or faculty may have resulted in some differences between the way a person may be listed in the college catalog and the way that person saw his duties. The total system is seen at least by the central office as having about 267 administrative positions. However, 144 respondents identified themselves as administrators. Some needed administrative positions, are necessarily "bootlegged" from faculty positions, an arrangement which leaves the percentage of responses we have somewhat open to question.

Approximately 74% of these respondents were male, some 26% were female. Administrators who also held teaching positions were asked to answer a similar set of questions as the regular faculty had answered. The number of responses in this category was so small, however, that interpretation would have little meaning. Somewhat less than half of those who responded as administrators said that their duties dealt with academic matters while a few more

than 50% said that their duties basically involved non-academic matters. Only 43 of the 144 respondents said they held any academic rank.

2:34

THE FINANCES

To do a complete financial analysis of the State colleges individually or as a system is far beyond the scope of this study. An attempt will be made to highlight certain elements of finance that bear on the functions of the colleges.

The state colleges represent about one third of public higher education in the State and about 11 percent of the total post secondary enrollment in Massachusetts. The colleges in 1970-71 had an appropriation of more than $35 million, and a total appropriation, including new construction, of about $60 million. When costs are reduced to a per-student basis, they stand at about $1,400 per student for operational costs, and just over $2,000 per student for the total 1970-71 appropriation to the system. These costs seem reasonable when compared with tuition fees alone of almost $3,000 at some private institutions.

Some comparative data here might well be helpful to provide a perspective. The operating appropriation for 1970 was as follows: the University of Massachusetts received about $40 million; the state colleges about $23 million; Lowell Technical Institute and Southeastern Massachusetts University, about $8 million; and the community colleges about $11 million. The total operating appropriation, including central administration, reached $82 million.

Massachusetts has traditionally received poor ratings on the issue of support for higher education.

> "Massachusetts is at the absolute bottom of the list of 50 states as to state tax investment per citizen for operating expenses of higher education ($12.80 in 1968), and as to the ratio of state tax investment in operating higher education to total personal income (0.33⅓ percent in 1968; ...set against it is Massachusetts' reported gain of 468 percent in total annual appropriations for higher educational operating expenses over 9 years, 1960-1969--fourth highest rate of gain among all the states."[5]

Somehow, last of fifty is the only part ever quoted. Note that even that bottom figure is computed on a per-citizen basis and Massachusetts has the largest percentage of private institutions in all the fifty states making contribution per citizen a somewhat invalid figure.

When the expenditures of the Massachusetts state college system are compared with more comparable data, the levels are not what the 50th state appellation implies. Figures from the American Association of State Colleges and Universities show Massachusetts state colleges to be above the lower third in cost.[6]

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[5]M. M. Chambers, Higher Education in the Fifty States (Danville, Illinois: The Interstate Printers & Publishers, Inc., 1970), p. 191.

[6]Fred F. Harcleroad, H. Bradley Sagen and C. Theodore Molen, Jr., The Developing State Colleges and Universities: Historical Background, Current Status, and Future Plans (Iowa City, Iowa: ACT, 1969), p. 66.

When we examine per student costs across the individual Massachusttts state colleges, we find considerable variation in cost per student per school. If we exclude the Massachusetts Maritime Academy because of its particular nature and its unique federal reimbursement, the range of costs in fiscal 1970, excluding capital costs went from a low of $1,009 per student on one campus to a high of $1,498 on another with a mean of $1,200 per student.

The dormitory ownership management and cost system on these campuses is confusing for they may be under 2 different forms of ownership depending on the legislation in effect at the time of building. The State, or the new building authority may construct them creating a situation where multiple room rents do exist for students on one campus. The situation is recognized and progress is being made toward a single management and fee.

The major use for operational funds is the payment of faculty and administrative salaries. The average salary of the ranks and comparative data are shown in the following table:

TABLE 2-15

PROFESSIONAL SALARIES IN STATE COLLEGE SYSTEM
COMPARED WITH AAUP RATINGS

Mass. State Colleges Average Salaries & Estimated Fringe Sept. 1970-71		Mass. Percentage Increase over Prior Year	National* Percentage Increase over Prior Year	AAUP Category III** Grade 5 Salary & Fringe
Professor	$17,742	3.47	7.5%	$16,930
Associate	14,319	1.93%	8.0%	14,070
Assistant	12,166	4.46%	8.3%	11,840
Instructor	10,127	3.03%	7.8%	9,760

Source: *AAUP,Category IIB--Public Institution, (June: 1971) p. 227.
**Grades run from 1-10, e.g. Professor salary (Category II) Grade 1; $21,580 to Grade 10 - $13,360.

These salaries place the Massachusetts state colleges by AAUP data at at least the 50th percentile in salary. Thus 5 out of 10 similar institutions have higher pay scales.

With the faculty pay scales in the higher ranges and the overall state support in the lower dollar ranges for similar institutions, the service functions of the colleges have suffered severe restriction. There is no adequate funding for positions at levels for administrators, guidance people, and clerical help. Thus the faculty are relatively well paid but lack of proper support will severely restrict their ability to contribute and thus will limit their impact on students.

The division of the costs of the Massachusetts public higher education system between tax dollars and student tuition payments is a matter of controversy at the moment.

An extensive study of this problem was done by Grabowski and Associates with and for the Board of Higher Education entitled, The Pricing of Public Higher Educational Services: Tuition and Fees, 1970. Among the findings of this study was the development of an econometric model that stated:

> "$100 increase in tuition level would divert a total of 3,990 students from the *system in the 1975-76 school year.... The analysis makes it very clear that increases in state scholarship aid must accompany any tuition hike in order to offset the rationing effect. ...small increases in tuition in the order of $200 may be possible without serious disruption of the goals and objectives of the Massachusetts public system of higher education."

One suggestion by that study is a fair share tuition level with the student paying 14 percent of operating costs. The data gathered by the present study of the socioeconomic level of the students in the state colleges suggest that the impact of any raise in tuition level would fall very heavily on the students and would strongly limit the institutional function as a ladder of upward mobility. A tuition increase would, we feel, ration out many more students from this sector of public higher education than the Board of Higher Education study suggests and in effect would change public policy on the usage of the colleges while increasing the net revenues of the State very little.

Grabowski and Associates, The Pricing of Public Higher Educational Services: Tuition and Fees, (Board of Higher Education Staff, 1970), p. ix.

*System here is used to mean all of Massachusetts higher public education.

CHAPTER THREE

THE ACADEMIC PROGRAMS

An important dimension of the description of the state colleges is, of course, the pattern of programs offered, the most visible instrument through which each college seeks to express its function and each student to achieve his purposes. Because the curriculum is so clearly central to the total effort of the institution, the rate and kind of curricular change are valid indicators of institutional vitality, of its ability to adapt to new needs, to accommodate.

Change is difficult, more difficult in colleges and universities than in other organizations, as observers such as Hefferlin have pointed out. The curriculum represents the organization. "The college curriculum of necessity is a political compromise about those intellectual and extra-curricular developments that are sufficiently respectable and marketable to be institutionalized."[1] The curriculum represents, then, order, the things that faculty believe in, stability, and responsibility of the faculty and the institution to preserve the cultural heritage. Curricular change is difficult.

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[1]Hefferlin, J. B. Lon. "Reform and Resistance" Research Report #7, June 1, 1971, American Association for Higher Education, Washington, D. C.

Where significant curricular change is found, it indicates, then, more than ordinary adaptability. Institutions, like the individuals that comprise them, need a high degree of security in order to be willing to venture change, and need a breadth and variety of interests and influences to accommodate adaptation. Significant curricular change needs support, financial support, either from the legislature in this case, or from such outside sources as the foundations.

In discussing the curriculum at the state colleges, a clear distinction must be made between undergraduate and graduate programs. The sources of income, the motivations, the forces shaping the curriculum are different. Indeed, a basic problem at most of the campuses is that of determining the relative emphasis to be given each of the two, and the consequent allocation of the scarce resources of manpower and money. On this point, the Willis-Harrington report, which provides guidelines for the colleges in many fields, is somewhat equivocal. Some of the colleges reflect this ambivalence; they are not sure whether it is their mission first to develop excellence at the undergraduate level, or whether they should work toward strong graduate programs, even at some cost to their undergraduate programs.

We take the position that the education of undergraduates is the primary task of the state colleges, and that the provision of post-baccalaureate work in any field, therefore, is at most supplementary and of secondary priority.

Undergraduate Programs

In the light of this stated position, it may well seem anomalous that so much space in this chapter is given to the discussion of the graduate programs. This is done not only because the graduate programs are an important element in the colleges, but also because a major concern with the graduate programs is their effect upon undergraduate education. Many of the study team's observations on undergraduate programs apply to all colleges in greater or lesser degree, and may, therefore, be expressed briefly. Voluminous materials gathered during the course of the study can be summarized. Major points of commentary have already been communicated to the colleges where this seemed appropriate; a brief note of special conditions or accomplishments therefore suffices.

The curriculum at the Maritime Academy, as might be expected, is highly specialized, oriented to the needs of the maritime professions. The two major curricular offerings are Marine Transportation, which prepares deck officers, and

Marine Engineering, which prepares engine room officers. Graduates may be granted inactive Naval Reserve Commissions. The members of the survey team do not consider themselves competent to judge the extent to which the materials taught have been kept current with the developing needs of the profession. We do raise a question, however, regarding the rigidity of the curriculum, and the extent to which it is prescribed. It may well be desirable to develop a broader base for professional skills. There would seem to be place, for example, for more work in the social sciences, notably such topics as collective bargaining, the psychology of groups, or trade economics. Substantial work has already been done preparatory to including work in the marine and atmospheric sciences, especially oceanography, meteorology, and sea-land ecology. It is anticipated that this desirable broadening of the program will go forward.

At the Massachusetts College of Art, a different approach to programming is evident. Although it was established as a school to prepare teachers of art, this school necessarily addresses itself also to the development of practicing artists working in a wide range of media. The programs, while professionally oriented, are highly flexible, subject to real individualization, yet they have strong common elements to encourage

the development of the competencies needed for teaching in the public schools. The visitors were impressed with the relaxed but earnest atmosphere on this overcrowded campus, reflected in the flexible programs and in the openness to innovation and curricular experimentation. Professional orientation and motivation are clear, breadth of general education could well be increased, but the informal and individualistic character of the field is reflected in the relaxed and purposeful programming.

On any campus, curricular change may be viewed as being of one of three types. First, new courses or whole programs may be added to the curriculum. This happens as a part of the normal process of growth and accretion. A new member of the faculty offers a new course in his specialty. More often, in the campuses with which we are concerned, that change results from the addition of a new program reflecting a new function; to begin to prepare nurses, for example, requires a new sequence of courses in the professional subject-matter of nursing, as well as some adaptation of the materials in the basic science courses open to all students. Much of the curricular change on the campuses visited was of this type, attributable to the allocation to the college of a new mission, the preparation of an additional professional group.

The second type of curricular modification is reflected in measures to increase flexibility and individual choice, usually by abolishing the requirement of certain courses, or by expressing the requirement in terms of a field of study, rather than specific courses. Such change does not add any new courses, but increases the number of options available to the student among existing courses. There has been on almost all the campuses a considerable movement to free the curriculum in this way, to provide flexibility through elective courses, to make more choices available to students.

The third kind of curricular change is the most difficult and least frequent, the recasting of program requirements, the development of new or alternative patterns for the degree, in recognition of new needs or conditions either in the discipline or on the part of students. Of the actual accomplishment of such change we found little evidence on most campuses, although there are promising beginnings for the future on several. A faculty-student committee at Boston has been working for about four years on curricular problems, chiefly those of general education. Bridgewater posits professional excellence as the criterion for curricular change. Fitchburg has developed new machinery for curricular decisions, only now beginning to function.

North Adams demonstrates a real interest in reevaluating its programs, and the climate there for experimentation seems very favorable. Salem's new leadership is developing effective coordination of curricular policy-making, enlisting faculty in the process, and is already developing experimental forms such as their "alternative college." Westfield has developed good machinery for curricular change, although progress has been retarded by external conflicts. Worcester, in addition to significant increases in the flexibility of its programs, is developing a new organizational pattern, the college council, with high promise in curriculum, as well as other fields.

The outstanding example among the colleges is Framingham; here a widely-shared and well-organized effort has been in progress since March of 1967, and a wholly new curriculum is ready to go into effect. The process has involved students, faculty, and administrators in a series of college-wide committees; the resulting curriculum is creative and unconventional without being radical. It represents a recasting of the entire four-year program in a new pattern which is simple, easy to understand and administer, and which combines a strong sense of professional purpose with the maximum opportunity for flexibility and individualization of program. In the development of this effort, Framingham has demonstrated strong democratic organization and

leadership, openness to change, and a high level of institutional vitality.

Common to all the colleges is a strong emphasis on vocationalism; that is, of selecting the subject-matter on the basis of the demands of the profession or vocation. This is a natural, desirable element of real strength. The programs in the colleges have been quite properly developed around vocational outcomes - teaching, nursing, business, and the like. The specialized schools, of art or of maritime science are, of course, the outstanding illustrations of this way of building the curriculum, but it is largely characteristic as well of the other nine colleges. This does not mean that they are "trade schools" in any derogatory sense, or that their programs are any the less academically respectable. Indeed, the frank development of professional orientation and motivation does not exclude the development of so-called liberal arts courses and programs, while it gives clarity of purpose and definition of function to the colleges.

This point will be commented upon further in the final chapter. Our purpose in noting it here is to point out that a curriculum so based in the requirements of the profession poses a special problem in the provision of general education.

This term is used here to include the general courses usually common to all students, regardless of their vocational end-points or goals. These are the studies which are often described as being designed to prepare students to lead a good life rather than to earn a living. The problem for the college lies in the determination of the relationship and relative emphasis of the two parts of the program. They need not be mutually exclusive: there is much in some professional courses that is important for general education, but the relationship needs to be clear.

This problem is compounded by a development already noted - the relaxation of requirements to increase flexibility. As the colleges have moved to free the curriculum to provide more flexibility and opportunity for individual choice, they have often relaxed the requirements which represented what many faculty felt to be a part of the intellectual heritage, hence, an integral element in general education. The provision for wider choice at the cost of inflexible requirements forces a reexamination of the real purposes of the general education program. In very few of the campuses did we find that curriculum-makers had faced up to this problem. In consequence, the purpose of this part of the program is largely unclear. To students, this becomes a matter of the relevance of courses; to faculty, a matter of the clarity of purpose of the institution.

The substance of the undergraduate programs at the state colleges cannot be adequately described without some attention to the methods and procedures used in offering these courses, and in developing new ones. In this area, as in others, the team's visits to the campuses and discussions with faculty and students corroborated the information from catalogs and questionnaires: the methods of teaching and of learning are too generally traditional, unimaginative, and routine, making little use of the developments in this field during the past twenty years.

A wide variety of procedures is available to the imaginative faculty member or program planner seeking to surmount the limitations of any curriculum. In an area where no established course seems appropriate to a student's needs, there is the possibility of independent study; this can consist of individual reading under guidance and tutorial aid, or it can be off-campus experience planned for its appropriateness and educational value. Survey and interdisciplinary courses can cut across the boundaries between subject areas and pursue broad topics of direct relevance to students. Such courses may be taught by a team, in which faculty from two or more fields combine to bring to the interdisciplinary course their separate viewpoints. Exchange programs with other colleges would open curricular areas not offered at the home institution; the

development of projects, the use of travel, the flexible use of time - all these and many others enrich and broaden the effective college curriculum. Of such procedures we found very few on the campuses.

In a few places learning and teaching are leaning toward problem-solving rather than rote learning. The consortium approach to curricular expansion has been somewhat more acceptable in practice, notably at Worcester, where the area consortium has unusual leadership and consequent vigor. But in such an area as international study, both <u>of</u> and <u>in</u> a foreign country, only Westfield has mounted a program and that only a beginning. And the most obvious and effective way to pool the strengths and surmount the weaknesses of the curricula at the various campuses was not suggested to the team on any campus; this is the simple device of permitting a student at any state college campus access to any other state college campus for a day, to use the library or laboratory, for a week or more, to pursue an individual study project with an outstanding faculty member, or for a term or year, to develop a curricular specialization not available on his home campus. To the extent that the colleges in the next few years can develop distinctive strengths, areas of special excellence, the greater will be the widening of curricular opportunities for students by permitting and encouraging cross-registration and interchange.

Continuing and Graduate Education

Our concern for the graduate offerings of the state colleges is of a different order. Indeed, it may well be that certain of the real impediments to the full development of these colleges are rooted in the exigencies of the graduate or post-baccalaureate programs. For, it is probable that no program sector within the state colleges is beset with more uncertainties and operational eccentricities than that of continuing and graduate education.

Continuing education in Massachusetts state colleges began in a relatively modest way in 1954 when the Division of State Colleges was authorized to establish extension programs. An appropriation of $15,000 was made and authorization given to spend up to $50,000 of the receipts of the program.

Recognition of the need for graduate and/or continuing education programs is indicated in the wording of the legislation resulting from the Willis-Harrington Commission's studies:

> "The State Colleges shall provide educational programs, research, extension, and continuing education services in the liberal, fine and applied arts and sciences and other related disciplines through the Master's Degree level."

The intent was to provide post baccalaureate programs, obviously, but also to stimulate program development at the

undergraduate and graduate levels by creating a research component and developing opportunities for staff to participate more fully in study, publication, and other professional activities. Without such resources and opportunities a faculty finds itself extremely handicapped in achieving professional growth and visibility. The faculty is further limited in its ability to attract professional recognition to the institution.

Carefully planned utilization and support of the continuing education function could be a major instrument in the development and improvement of the state colleges. The major concern, however, is how well the continuing education program has succeeded in achieving its purposes. Considering the uncertainties of financial support and program planning, it has shown remarkable vigor. In the first semester in 1954 there were 72 course offerings serving approximately 4,500 students in over 7,100 course enrollments.

In 1968-69 the program dimensions revealed the following:

- over 700 courses
- over 15,000 students
- over 30,000 course enrollments
- increased diversity of offerings in the liberal arts, sciences, business and community service
- approximately 5,000 master's degree students enrolled

- 1,039 master's degrees awarded
- approximately 1,700 bachelor degree students enrolled (126 bachelor degrees awarded)
- over 7,000 students in certification programs

Several questions concerning the development must be answered: How has the growth been achieved? How well has the program developed? What problems have been encountered? What changes should be made if continuing education is to realize all of its goals?

It is safe to say that growth has been achieved with great difficulty and uncertainty, and not always in the direction of greatest professional desirability for the institutions. Continuing education growth has been based on an annual expansion factor of ten percent in students, course offerings, and services. This has been accomplished with no previous assurance of adequate funding. The program must be self supporting and operated at no cost to the State, including any expenditures from the regular day program maintenance budget.

As of 1969, continuing education programs could spend up to $2,000,000 of receipts from tuitions and other charges in program costs. All receipts are sent to the State and refunds made to the institutions on the basis of the annual program

costs. In interviews with directors of continuing education at the various state colleges, it was learned that the refund varies among institutions by as much as 20 percent, a fact which makes planned development difficult.

Because there has been no statewide definition of a program to implement the Willis-Harrington provisions and because statewide coordination has been almost impossible, there is tremendous variation in continuing education programs, staffing, and in graduate studies.

Among nine state colleges (not including Lowell and the Maritime Academy), three have full time directors of continuing studies budgeted under the college, three have full time directors also carrying other titles, and three use faculty members who serve as directors on a part time basis. Seven of the colleges provide part time administrative assistance to the directors.

In all of the colleges, directors of continuing studies are involved in graduate programs in varying degrees. Three colleges have separate deans of graduate studies; one has a director of graduate programs; three others have directors of continuing studies who also serve as dean of graduate studies; the other two institutions have directors of continuing studies who perform the duties of graduate dean without title or additional pay.

On all the campuses which have a continuing studies program, the director has the full responsibility for all aspects of the institution's summer session, program, finance, staff, students, publicity, correspondence, and so forth. To carry out these responsibilities for approximately 7,500 full time students in addition to numerous other services rendered by continuing education to the institutions, best estimates indicate there is a total staff (assistants, secretaries, clerks) of about forty people for the entire State.

Under current fiscal policy, the state colleges have no venture capital upon which to base development planning and related professional costs. They cannot hire needed administrative and support staff. They cannot employ a faculty for continuing and graduate studies. All institutions use their own faculties, for the most part, and reimburse them on an overload basis. The stipends range from $560 per course to $850 per course according to rank, an amount which is not only disproportionate to standard salaries but also is insufficient to attract and hold the most competent teachers from inside and outside the system.

A number of other problems arises from the fiscal operation. Figures collected in this study indicate that from

about 45 percent to 63 percent of state college faculty work on an overload basis in continuing education and graduate programs. Stress between those who do and those who do not, over availability for student advisement and other activities creates inevitable morale problems. Due to financial restrictions, graduate reference libraries are generally inadequate. Several of the institutions have had and continue to have critical problems with accreditation because of these conditions.

An additional complicating factor for continuing education programs which must be self-supporting is that state law provides for free tuition for several groups: veterans, active duty service men, selected professional and non professional state employees (and others), in addition to tuition vouchers given to school systems for remission of costs of tuition for cooperating teachers.

According to a recent report, 23 percent of all students enrolled in continuing studies are on a tuition free basis, a current loss of about $500,000 annually from institutional income which is not reimbursed by the State. One effect of this is that students who do pay, in many cases pay higher fees and, therefore, subsidize to some extent the tuition-free students. Another unfortunate result is the necessity to overload classes to remain self-supporting.

Considering all of the problems affecting the continuing graduate education programs under current legislation and operations and with the current $2,700,000 ceiling in continuing studies, it appears that a graduate program fully supported by state funds is a logical alternative, even in a tight economy. Analysis indicates that the costs estimated for such a proposal (about $17,000,000) are realistic.

Whether or not such a proposal is adopted, however, several things must be done if continuing and graduate study programs are to realize their full potential in achieving the purposes established in the law.

Continuing and graduate education have demonstrated remarkable growth in terms of diversity of offerings and numbers of students served, despite tremendous obstacles. Legitimate questions, however, can be raised regarding their impact on raising the level of faculty professionalism, stimulating research and publications, developing new programs and enriching undergraduate programs.

Although Chapter Six will carry the general recommendations growing out of the entire study, several specific recommendations on the matter of continuing and graduate education seem appropriate:

a. In the light of all of the elements of the legislation, current programs should be reviewed, explicit goals defined, and a coordinated statewide plan developed for the direction of thrust.

b. Continuing education programs should be assured of sufficient fiscal support and autonomy that they have venture capital for program study and development.

c. Funds should be made available for adequate staffing.

d. Policy should be developed relative to the different characteristics of continuing education of a community service nature and graduate education of a professional nature.

e. All continuing education or graduate programs should establish a research component to conduct studies and to assist faculty and students at both the graduate and undergraduate levels in research design, funding, statistical assistance, and publication.

f. Sufficient funds should be provided to encourage and insure faculty professional growth through leaves, professional travel, participation in national and international professional associations, conferences, and the like.

g. Policy should be revised to allow continuing education and graduate programs to have their own identifiable faculty either by authorizing positions in post baccalaureate programs or by authorizing the teaching of such courses as part of the regular faculty load.

While all of the above recommendations are seen as necessary of implementation if the state colleges are to move toward greater professional maturity and prestige, it is clear that the overriding need is for statewide long-range planning and coordination. While those most directly responsible have taken strides in this direction, they will need support and encouragement if they are to succeed.

CHAPTER FOUR

THE INSIDE VIEW OF THE COLLEGES

An important element in the description of the state colleges is the view of them held by those most directly connected with them--their administrators, faculty and students. This chapter reports how these groups perceive their colleges. Since individual observers inescapably interpret as they report, it may well be argued that these perceptions in some cases are not mirror reflections of the realities they perceive, that they may be unclear, incomplete, or partly untrue. What is important is that they are the perceptions actually held by the respondents in the sample, who represent an accurate cross section of the total group in all the colleges.

Such perceptions not only reflect the colleges but also tend to shape them. The phenomenon of the self-fulfilling prophecy is widely recognized as it applies to schools and colleges. The student selects the college which seems to him to represent and reward certain desirable qualities or characteristics. Once in the college, in an attempt to be successful there, he makes himself more like what he believes the college wants; as he does so, he makes the college more like what he believes it to

be. The expectations new students have of their college are strongly colored by the perceptions of those who have preceded them. To examine those perceptions, then, may yield important insights into the nature of the colleges.

The instrument used to elicit and classify these perceptions is the Institutional Functioning Inventory, published for research purposes by the Educational Testing Service.

The IFI, designed to determine institutional validity, uses internal measures as its yardstick. It is important therefore, to keep in mind that all through this survey of the subjective attitudes of the people at the state colleges, we are talking not about existing conditions, but personal perceptions of these conditions by those closest to the situation, in regard to the institutional stance on various measures of an organization.

Measurement Scales

The complete technical definitions of the eleven scales are included in Appendix A. For the purpose of the following narrative, the scales are as follows:

1. IAE--Intellectual- Aesthetic- Extracurriculum: availability of stimulation beyond classroom activities.
2. F--Freedom: academic and personal freedom on campus.

3. HD--Human Diversity: heterogeneity of constituent groups on campus.

4. IS--Concern for Improvement of Society: solving of social problems by campus personnel.

5. UL--Concern for Undergraduate Learning: degree to which the college emphasizes undergraduate teaching and learning.

6. DG--Democratic Governance: the opportunity to be involved in decisions affecting one's future.

7. MLN--Meeting Local Needs: institutional emphasis on solving local manpower needs and adult education.

8. SP--Self study and Planning: attempts at continuous long range planning.

9. AK--Concern for Advancement of Knowledge: emphasis on research and scholarship.

10. CI--Concern for Innovation: institutional commitment to experiment with new ideas in education.

11. IE--Institutional Exprit: morale factor.

Each scale is represented by 12 questions within the questionnaire. The higher the score, the more respondents saw the morale factors as positive at that institution.

The scales were scored across some 37 colleges and universitites selected by type of control, level of offering, and to some extent geographic spread. The percentile scores that are shown in profile charts are based on these national norms. We also will show the scores for similar institutions that are more closely related and matched to the

Massachusetts state colleges. These therefore are more accurate measures for comparison of attitudes. For these, only faculty data were available and usable for comparisons. These norms have been obtained from Educational Testing Service. We have been assured that they are a close match in size, control, and make-up to the colleges in the Massachusetts system. Both the national norms and these similar institution samples will be used for discussion.

The student groups answered only the questions relating to the first six scales. It was felt that only on these have they sufficient exposure to respond in a meaningful way. For this reason, the necessity of experience with the institution, only Juniors and Seniors were requested to respond. Faculty and administrators answered questions relating to all scales.

1. Institutional - Aesthetic - Extracurriculum

A score of 8 on this group of questions would put an institution at the 50th percentile in the national norm. This in effect means that 50 of 100 score higher, or alternatively, that 50 of 100 score at a lower level. At one of the Massachusetts state colleges, the students felt that attempts to make available contacts beyond the classroom were at the norm. At another institution, it fell at the 10th percentile. This means that students at 90% of the responding institutions

viewed attempts at extracurricular enrichment on their campus at a higher level than on this latter campus. The average for all nine institutions fell at the 16th percentile; in short, the students' perception is that not much is being done within this category.

There are some mitigating factors. IAE is seen at a somewhat higher level by seniors than juniors, indicating perhaps that extracurricular activities are available on the campuses but that it requires another year to be aware of their presence. Residents similarly perceived IAE at a higher level than commuters. Again, it is assumed they were present and able to take advantage of whatever was offered. The lowest socio-economic quartile of students saw this availability at a level statistically lower than the students in the highest socio-economic quartile; awareness therefore differed among the socio-economic groups.

Even with these variations, this aspect of college life is seen by the students as not receiving much attention; and those who might benefit from it most are least aware of its even limited presence.

Faculty consistently see the institutional attempts at curricular enrichment as at a lower level than do the students. At only one institution is the 50th percentile approached,

while four institutions are at the 7th percentile. Alternatively, 93% of the norm group see the attempts at IAE at a higher level than do these four.

Here the detail reveals differences within faculties. The oldest faculty group, 50 years and older, sees the attempts at institutional enrichment at a much higher level than do the younger faculty age groups. Likewise the view of more attempts at IAE increases proportionately with increased rank and years on the faculty.

All Massachusetts state constituent groups (student, faculty, and administrators), perceive the attempts made by their institution to expand the college experience beyond the classroom at a low level. There is general agreement on this low level among the groups and institutions, with only one or perhaps two institutions regarded by their members as reaching an acceptable effort level.

2. Freedom

This scale deals with perceptions of faculty, administrators, and students as they view the set of the institution toward academic freedom and freedom for their personal lives in relation to the campus. A score of about 9 on the 12 questions relating to freedom would put an institution at the mid-point of all the scoring institutions.

Overall, students saw freedom on the campuses at low levels. There was considerable variation by campus, however. Two colleges fell near the 16th percentile while the lowest was at the 1st percentile. In this latter case, therefore, 99% of the norm institution students felt they had more freedom.

There may well be philosophical arguments about how much freedom students should have. Yet by any set of standards the students in the Massachusetts state colleges view their range of choice as being among the lowest.

There is for all practical purposes no difference between the way juniors and seniors view freedom. At some colleges, resident students feel there is slightly more campus freedom than commuters, while the trend is reversed in others. There is little significant difference between the socio-economic status range, but when a difference exists, the tendency is for the upper quartile to see the campus as a freer place.

The faculty view on campus freedom, in all cases, on all campuses, is at a higher level than the students'. On a percentile basis, it ranges from about the 56th percentile down to the 2nd percentile where 98% in the national group of institutions see themselves as having more freedom than do those in the Massachusetts colleges. While, therefore, the

faculty view is higher than the students', it is quite low compared to national scores. When compared to the representative group of state colleges, it is still relatively low. The highest range of the Massachusetts colleges just reaches the lower level of their compatriots' norms, and the upper range of freedom for these other state colleges is light years ahead of Massachusetts colleges'.

As might be expected, older and more experienced faculty see the campuses as freer places than younger, and less experienced members. The view of freedom, however, did not increase in close parallel with academic rank.

Administrators see their institutions as much freer places than faculty or students. The highest institutions almost reach the 17th percentile while the lowest fall back close to the 2nd percentile.

Freedom is seen as a condition that exists on the campuses in greatly varying degrees depending on the status of the respondent. Administrators see the campuses as relatively free places, while faculty sense less freedom of action and students feel least free of all. The range between the groups on each campus is quite large. This great divergence of perception, regardless of the position on any norm scale, shows that freedom is more than a problem of semantics on these campuses.

3. Human Diversity

This scale measures the way the constituent groups view efforts by the institution to increase heterogeneity in the make-up of the student body and faculty. We do know from factual data that at least 95% of the student body is from Massachusetts and that approximately 26% of the faculty hold a degree from a Massachusetts state college.

While the degree to which heterogeneity was seen as a factor varied by college, it was seen as quite low by all students. At any one college there was little difference in the view of juniors and seniors and commuters and residents. Across the total range of socio-economic status, which covers family incomes from under $4,000 to those in excess of $26,000, students saw the attempts to widen the diversity of student background at the same, quite low level.

Faculty consistently saw attempts by the campus toward heterogeneity at a higher level than the students. Still the system norm for the faculty scale is at the point where 32% of the norm institutions fall below the state colleges. There is a significantly large variation on this scale between the viewpoints of the oldest and youngest faculty. There is a similar but less marked tendency for the members to see more heterogeneity as rank increases.

Administrators tended, as on the previous scales, to see a rosier picture than either students or faculty. The range is not very great between the colleges at the extremes.

Objective and attitudinal data concur to show that the system does not take great pains to bring divergent people and ideas together. Particularly as a Massachusetts public institution, there may not be much opportunity to recruit a wide range of student types; but if this is a given, then it is certainly more important that the faculty should represent a very broad spectrum of ideas and backgrounds for the benefit of the students. This goal does not appear to have a high level of importance for the decision makers of the system.

4. Concern for Improvement of Society

This scale measures the attempts made by the personnel at an institution to apply their skills to the solution of societal problems. There are different viewpoints as to the position that an institution should take, ranging from an ivory tower outlook to total involvement in society. On this scale there is general agreement among the faculty, students, and administrators. All view it as a low priority. Faculty, however, see this concern at a lower level of importance than students or administrators.

The state colleges prepare teachers for the Commonwealth. A large number of elementary and secondary schools are in urban areas. It would seem that a public institution, such as the state college system, could legitimately take as a goal the improvement of education as a key to the revitalization of urban areas. The agreement in the low level of concern for improvement of society, however, might be construed as evidence of a serious deficiency on the part of a publicly supported institution.

5. Concern for Undergraduate Learning

This scale describes the degree to which a college emphasizes undergraduate learning and teaching. When we consider that the state colleges are undergraduate colleges and that the students and faculty who responded are involved with undergraduate education, it might be surmised that they would see this function at a high level. This is not the case. At 90% of all the norm institutions, students perceived undergraduate learning at higher levels than the average for the Massachusetts state colleges. This was still true when the average was compared with public universities, where undergraduate learning is traditionally regarded as a low level priority.

Faculty and administrators had higher perceptions than students of their institutions' devotion to undergraduate learning, but even they, on the average, were no higher than the 25th percentile. This is somewhat higher than the

perceptions at a public university, but very much lower than at a sample public community college.

This set of perceptions is one of the most provocative findings. These colleges are undergraduate institutions with only some beginnings of an evening graduate program. Yet all parties, students, faculty and administrators, view the institutional commitment to undergraduate learning at a low level, compared with institutions that have other claims to excellence. It should be noted that the sample data from comparable out-of-state colleges, reflect a similarly low concern for undergraduate learning.

These colleges are funded to educate undergraduates; yet, paradoxically, the people who represent, and in effect, are the colleges, assign low priority to this.

6. Democratic Governance

The perceptions of the individual as to their level of participation in the decision process are registered on this scale. There is no particular level at which this scale should fall, but there is a generally recognized body of organizational and behavioral theory that tends to show that people perform at a higher level of potential when they are part of the decision-making process that affects their lives.

Administrators come close to the 50th percentile. They are truly involved in the decision-making process. Faculty, falling at the 27th percentile, see themselves as less involved, and students, at about the 7th percentile, generally see themselves as quite removed from the decision-making process.

The overall figures highlight a very wide variance among the colleges. On one campus administrators are at the 7th percentile. Similarly, faculty perceptions range from the 75th percentile down to the point where the faculty at one school see themselves as totally uninvolved in decision-making.

7. Meeting the Local Needs

The service orientation of the state colleges, as shown by their response in this scale, is relatively high compared to their responses on the other scales. Faculty and administrators fall respectively in the 39th and 42nd percentiles. This relatively strong attempt to meet local needs and provide adult training is highly commendable and socially useful, but it is questionable whether this should rank as an institutional function at about the same level with undergraduate learning.

8. Self Study and Planning

This scale reflects the priority level that the institution sets on long-range planning. The administration at two colleges feel that their institutions are well above the

50th percentile while at one it is felt that the level is lower than all other institutions. The faculty generally concur at a somewhat lower level. At one institution there is a very wide divergence between the higher level at which administration feels it is planning and the lower perceptions of this as seen by the faculty.

When other similar institutions are compared, we find that these state colleges fall generally lower than their contemporaries across the country.

The function of long-range planning and self study is implicit in an institution's recognition that it is not working at its potential. This awareness is a prerequisite to a search for routes toward improvement. The move toward improvement was quite evident to the study visitation teams at those institutions that had high self perceptions on this scale.

9. Concern for Advancement of Knowledge

This scale measures the level at which respondents see the institution as involved in research that would extend the frontiers of knowledge. This is generally considered a university function requiring extensive faculty time, graduate student assistance and high levels of financial support. One institution saw itself at about the 50th percentile. If one remembers

that the national norm group contains many universities and then notes that at this same institution undergraduate learning is also rated only slightly higher than the 50th percentile, the problem of lack of clarity in function of these institutions becomes apparent. This is not to state that some level of applied and even basic research should not be a function of the state colleges; the problem lies in the comparative level of emphasis. At similar institutions across the country, however, the AK scale is at somewhat the same level, showing perhaps that this problem is to some degree characteristic of the former teachers colleges which are striving toward comprehensive college status.

One need only compare the profile of a public university to see the confusion at the state college level. At a sample public university, advancement of knowledge is at the 94th percentile. This, therefore, is the "raison d'être" of the institution, yet its devotion to undergraduate learning, while low, falls not very far below the level at the Massachusetts state colleges. There is evidence at these colleges of a striving for university type status, which is diverting attention and resources from its purpose of educating undergraduates.

10. Concern for Innovation

This scale registers administrative set toward the encouragement or discouragement of new ideas. At three colleges the administration reached toward the upper values in their attitude toward innovation, while the faculty showed less enthusiasm. At five of the colleges, the faculty felt that institutional receptivity toward new ideas fell at the 10th percentile or lower.

Concern for innovation does not seem to be characteristic of this type of college when compared to the available country-wide state college data. Here in Massachusetts where the state colleges train approximately 50% of the teachers in the state, it becomes obvious that in order for an attitude of receptivity to innovation to reach the classroom and have impact on children, it must begin with the training institutions. Indeed, the way the students are educated in these colleges not only affects the content of their knowledge in the cognitive domain but may well have strong impact on the affective areas, particularly in reference to their own desire for change. Only one thing is certain for the future and that is that change is increasing at an increasing rate.

11. Institutional Esprit

The institutional esprit scale attempts to measure the sense of morale, shared purposes, loyalty and community feeling.

The picture at three institutions is encouraging. At one, the administrators see this factor as higher than at 96% of the norm institutions and the faculty at these three are above all the norm institutions. These institutions, in the eyes of the faculty and administration, are a functioning unit with blending skills, open communication and a community concept. At three other institutions, faculty perceived institutional morale was lower than the perceptions by faculty at 97% of the colleges in the sample. There was a very great divergence between faculty and administrative perceptions, e.g., administrators were at almost the 50th percentile, while faculty were at the 2nd percentile. This gives the appearance of two groups, occupying the same turf, yet feeling completely different about their relation to it.

College of Art

The students who attend voiced as most important their rationale for attending as follows in descending order of importance: finances, type of education desired, reputation of faculty, transportation availability.

The faculty have one of the most complete and rational handbooks ever seen by the study group. If the aspirations expressed here reach the level of practice, the openness of policy must lead to a healthy institution. The feeling of the institution can best be expressed by this quote from the

preamble of the Constitution of the College of Art:

> "...believe that the objectives of an educational institution are most effectively accomplished when cooperation exists among the students, the faculty, the administration, and the Board of Trustees. We believe that by formal organization of college government we can establish communication of students, faculty, administration and Board of Trustees; that we can use the knowledge and experience of the faculty to formulate academic policy and advise in the operation of the academic program; that we can make effective decisions in regard to curriculum and faculty membership; that by majority agreement we can keep high morale among all concerned in these matters."

The college seems to be in the process of doing just what it says it is here to do.

Maritime Academy

In interpreting the returns from the inventory it must be remembered that the Maritime Academy is different in form and design from the academic colleges and therefore national norms and other state college norms in comparison may simply not apply, however, the findings in some areas are provocative.

It is not surprising that students, faculty and administration agree that low priority is given to aesthetic extra-curricula. It would, however, seem that a student emerging with a bachelor's degree should have significant exposure to the world beyond his method of earning a living.

As might be expected at a quasi-military academy, freedom was rated by all three groups lower than at the other colleges. What is less to be expected, however, is that on the scale of Democratic Governance both students and faculty rated the institutional priority very low, but the administration felt more democratic governance existed than did the norm of administrators at the nine academic colleges.

There is very wide divergence between the administrative concept of the amount of self study and planning and the level of this as perceived by the faculty. Similarly, wide variance occurs on the concepts of concern for innovation and the widest of all in the concept of institutional esprit, as seen by administrators and by faculty.

Questionnaire Comments

The standard IFI answer sheet has on the reverse side a place for comments that allowed the respondent to air feelings beyond the specific questions. About one in five took advantage of this opportunity. The comments varied from pet grievances of an individual or general attitudes displayed by many at a particular institution.

In the analysis an attempt was made to cluster the comments around the scales of the IFI. Freedom, or the lack thereof, came in for its share of commentary. Faculty and

students on two of the campuses were quite verbal about the lack of shared governance. Poor communication was often cited as a contributing factor. There was some indication from both faculty and students at two of the campuses that there had been some improvement in the amount of perceived freedom and an approach toward democratic governance.

Students on many campuses commented on the homogeneity of the student and faculty composition. The students were characterized as white, Catholic or Protestant, and lower middle class, a characterization borne out by the study. The comments on the need for diversity in the faculty were less critical that those for greater diversity in the student body. Many comments from faculty and students involved change or lack of change (innovation) at the colleges. About the same number of students felt that not enough change was taking place as were satisfied with the present rate of change. Faculty were also divided in their opinions, but here one in four felt that changes being introduced were in the wrong direction.

Low morale, particularly at those institutions where there was a high level of authoritarianism called forth many faculty comments. The number of comments per school correlated closely with the entire faculty sample rating of esprit on the IFI scales.

The instrument itself, as is usual, received its share of unfavorable criticism. It is interesting that most of this type of comment came from administrators. In general, the comments supported the sample results on the IFI perceptions scale.

Summary

The perceptions of their institutions held by the faculty, administrators and students reflect their feelings and shape the future of the colleges. The Institutional Functioning Inventory measures these perceptions along 11 scales that give insight into the institutional stance on measures of an organization. The colleges fall generally lower than the 50th percentile on all scales when compared with the national norms, but only slightly lower than their matched norm groups of state colleges over the country.

The scales generally tend to illustrate lack of clarity of function. This confusion of function was evidenced by the finding that the faculty perceived the functions of meeting local needs and of undergraduate education at almost equivalent levels of importance. The relatively poor climate, as shown by the low perceptions of Democratic Governance, Freedom and Institutional Esprit, was confined to two or three of the

colleges. In contrast, the top two or three showed a climate within which, given clear institutional purpose, academic programs might thrive.

Inside View of the College: Graphics

The charts that follow depict in two styles of presentation the perception that the administrators, faculty and students of the nine academic colleges hold of their institutions. One style deals with data at a single institution and presents a profile of attitudes at a single institution. The other allows a view of each attitude scale across all of the nine institutions.

A. Institutional Profiles

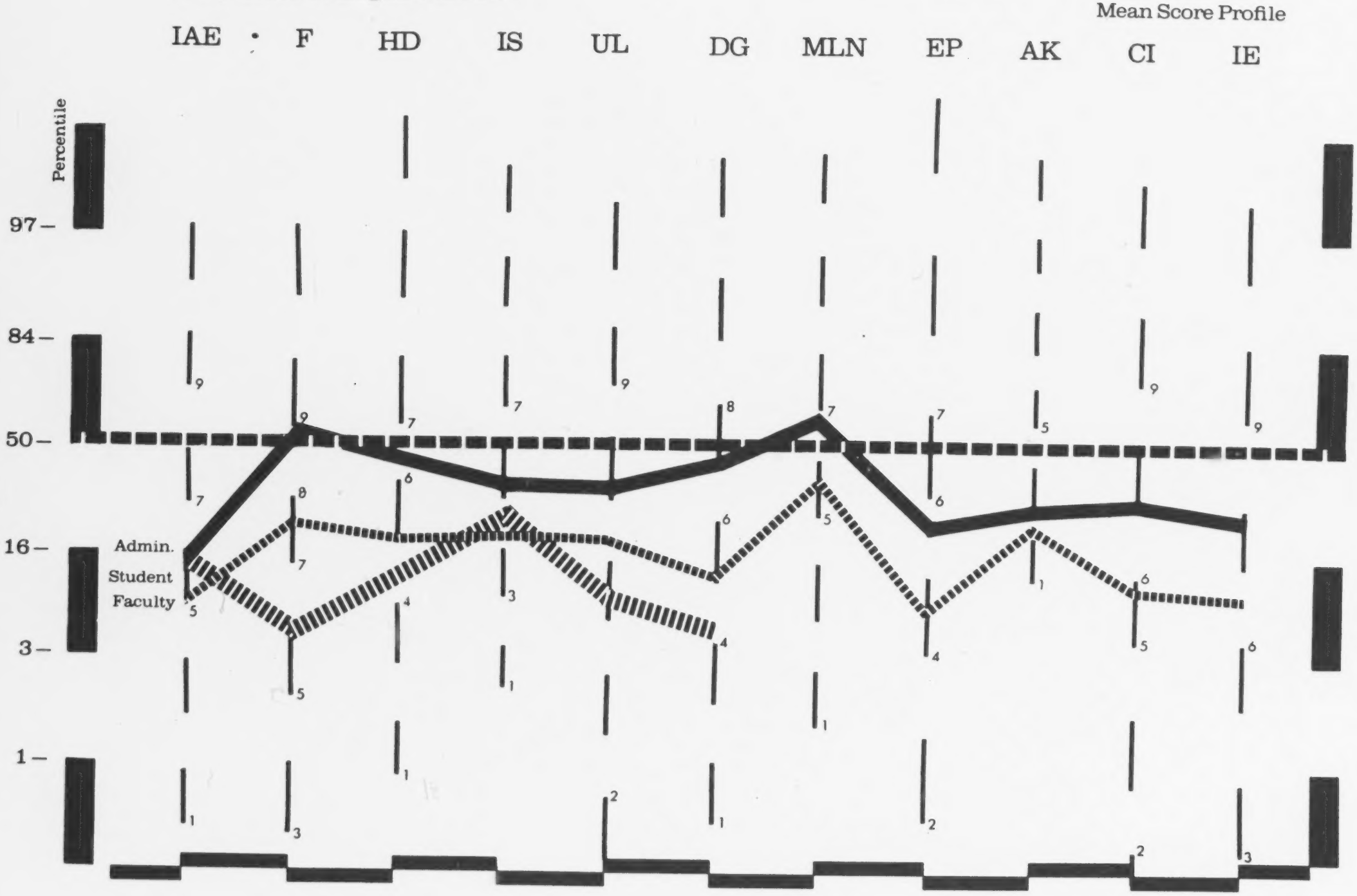
The three charts, The Nine College Norms, Elm State College, and Oak State College, depict a profile of all attitudinal scales for all constituent groups. The nine college norms show the mean level for each attitudinal scale at all nine institutions. The scale score represents the average score (0-12) on the questions dealing with a particular attitude, e.g. (Administrators reached 8.9 on the Freedom scale). The percentile scale shows the percentage of all institutions in the national sample that scored above a particular scale score, e.g. (on the Freedom scale 8.9 reached just above the 50th percentile in the national norms. Thus 1 in 2 national sample administrators sees more freedom on his campus than do Massachusetts state college administrators). Note the national norm sample that established the percentiles contains public and private institutions as well as colleges and universities.

Elm State College and Oak State College are obviously false names. The profiles, though, represent the range

found among the nine Massachusetts academic colleges. The lows and the highs that are concealed by the norms, as well as the range of perceptions found on a single campus, are revealed. Oak and Elm represent the two extremes among the nine colleges.

Institutional Functioning Inventory
Nine State Colleges Norms

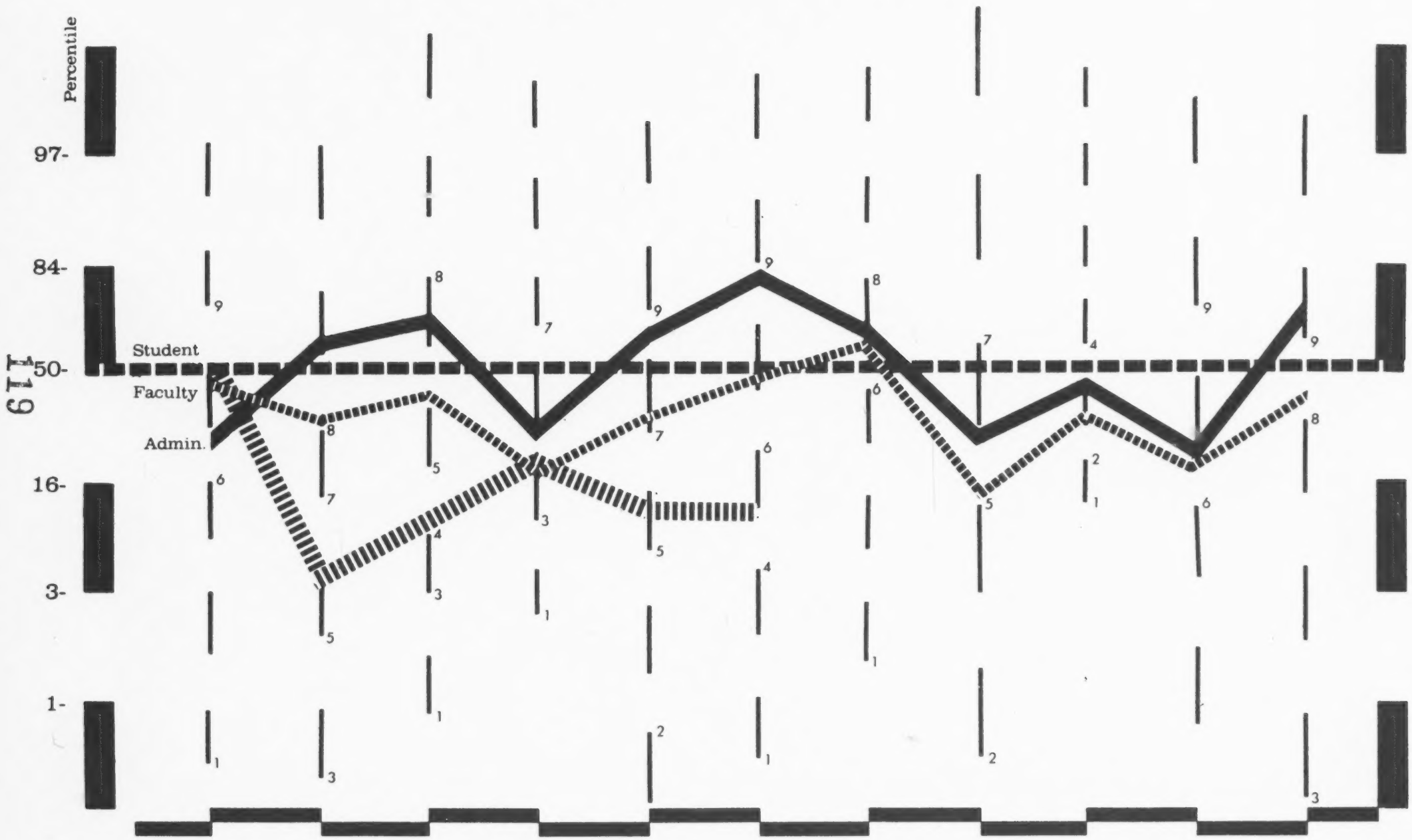
Mean Score Profile



Institutional Functioning Inventory

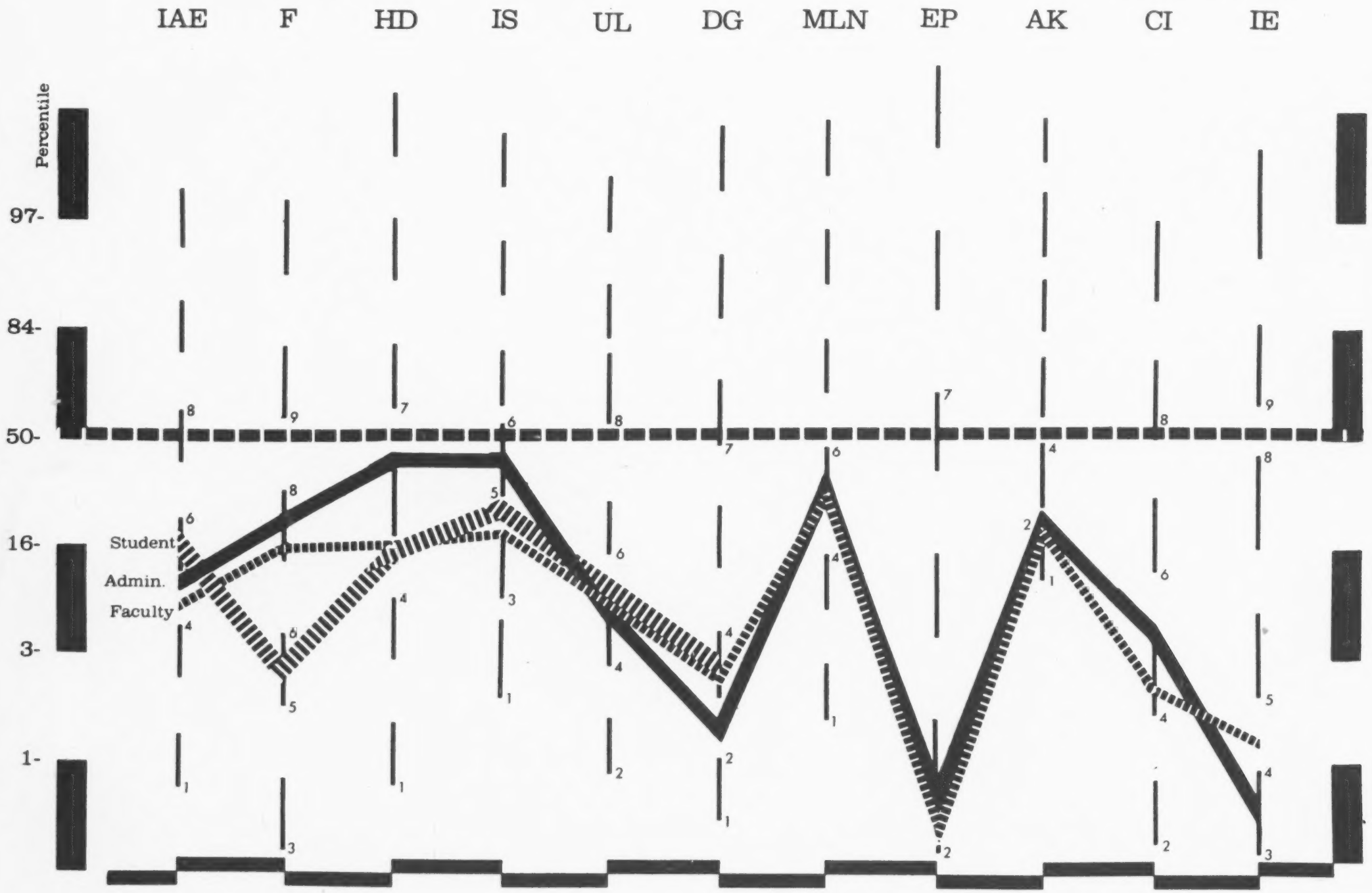
Elm State College

Mean Score Profile



Institutional Functioning Inventory
Oak State College

Mean Score Profile

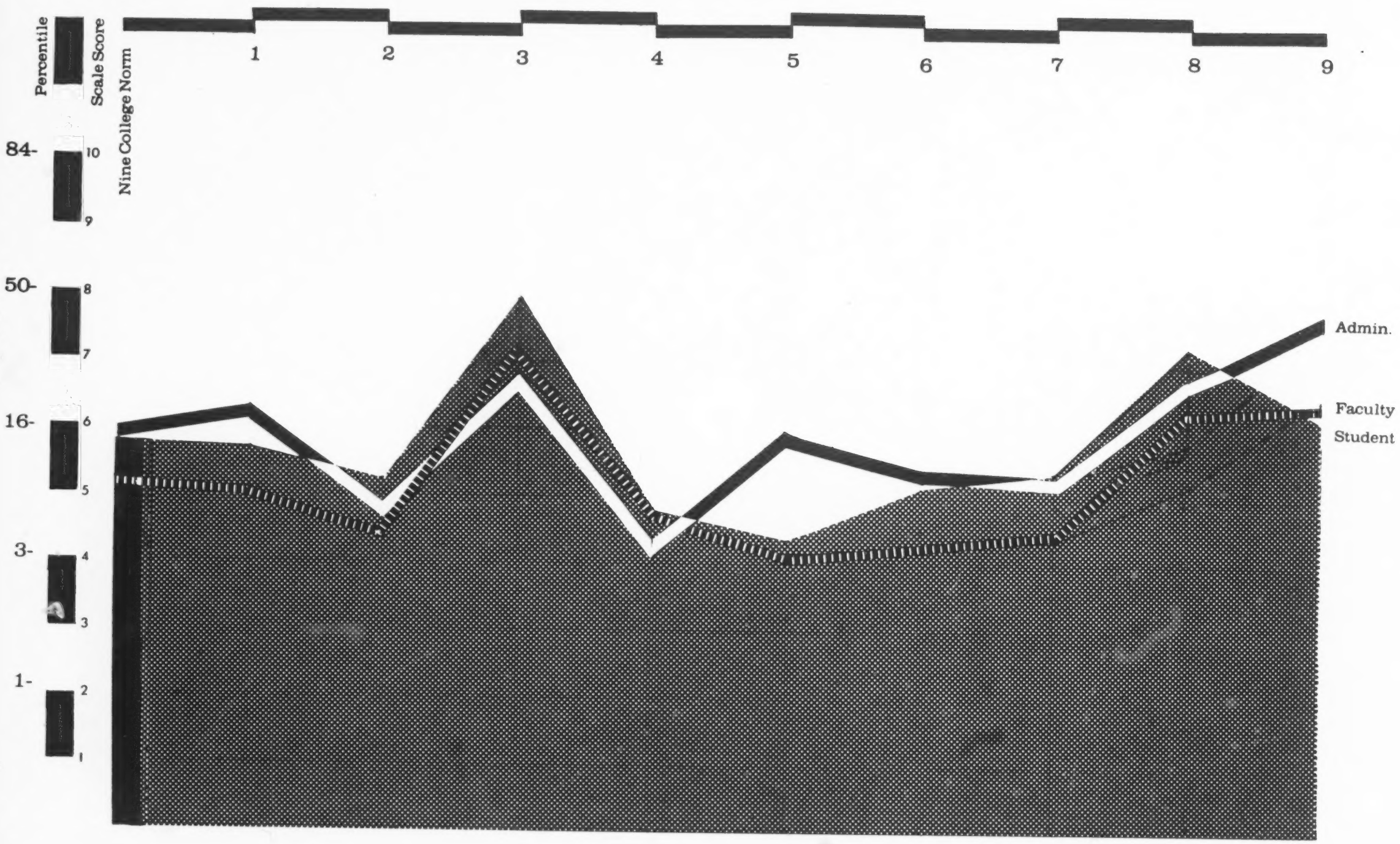


120

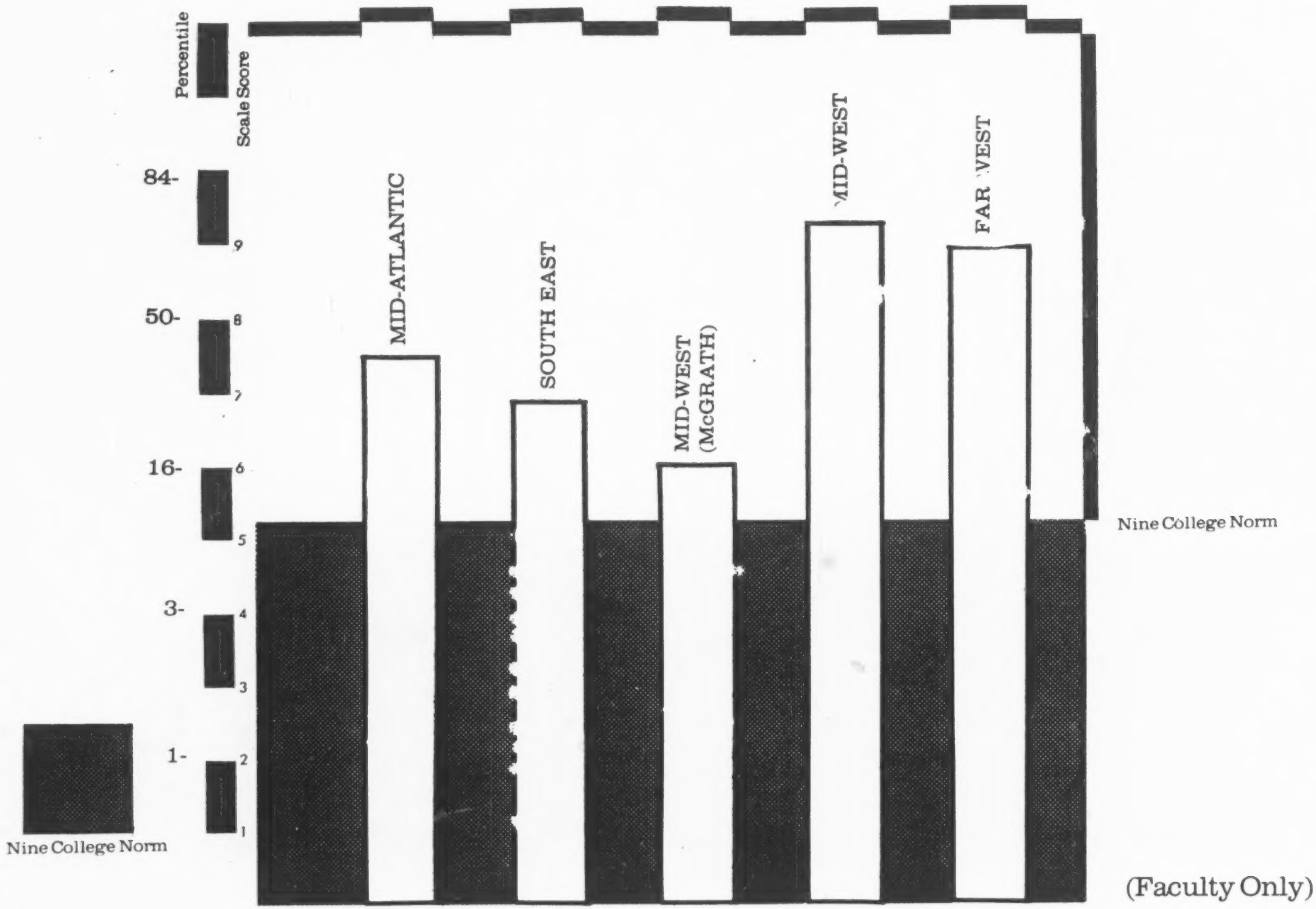
B. The Eleven Inventory Scales

Each scale is depicted by a pair of charts. On the first, the nine college norm on that particular scale is shown compared with the national sample percentile as described above. The colleges are listed in random number sequence. From each chart one can see the variation and range among the colleges on a particular attitudinal scale. The second chart covers the same attitude but compares the nine college norm to selected matched colleges. Shown as a base is the nine college norm compared both to national percentiles and to other institutions spread geographically over the country. These latter are matched as clearly as possible by control, size, and type to the Massachusetts colleges. The unit labeled McGrath is a composite score developed from a study by Dr. Earl J. McGrath. These comparable data were available only for faculty.

Intellectual Aesthetic Extracurriculum



Intellectual Aesthetic Extracurriculum



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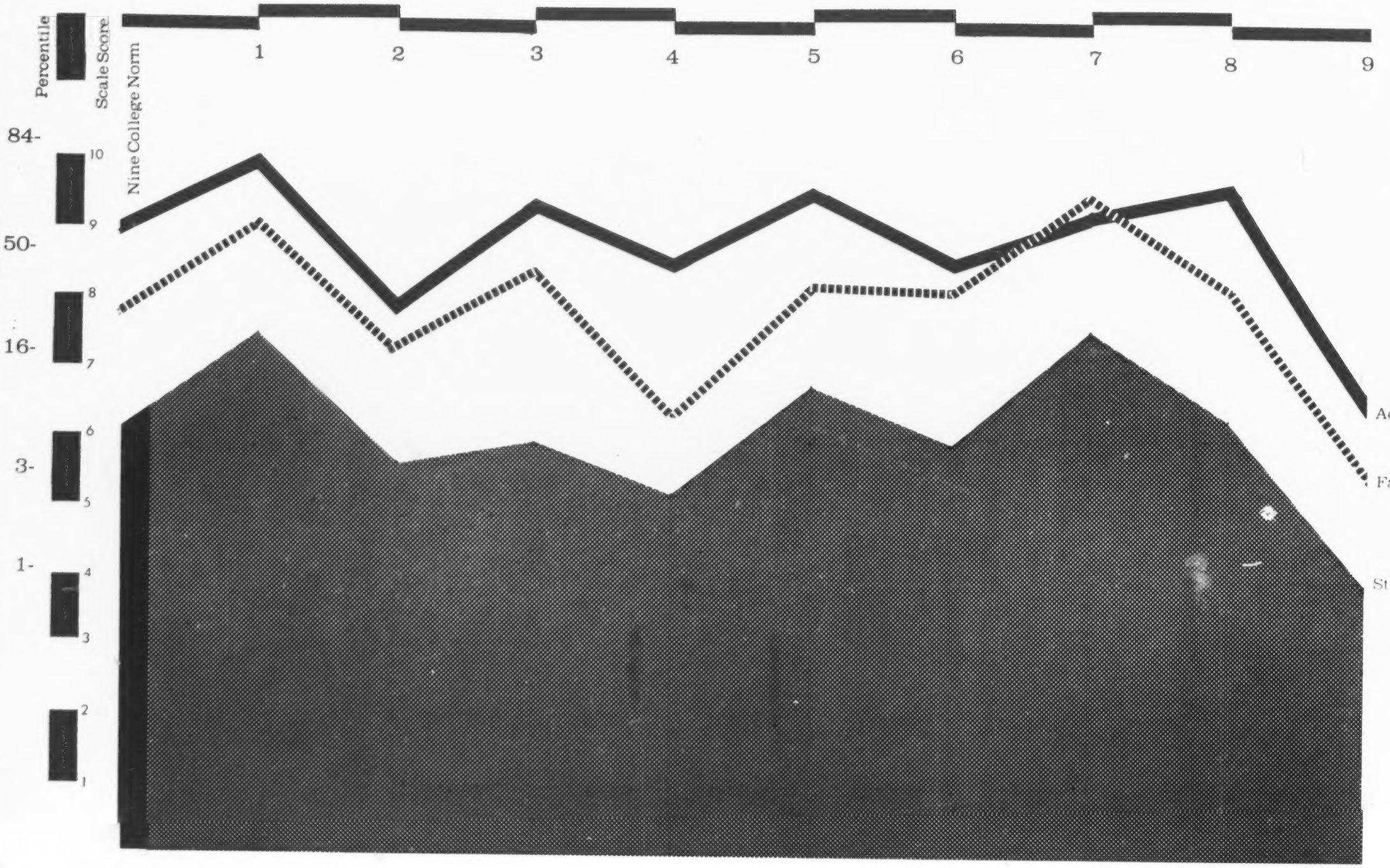
Percentile
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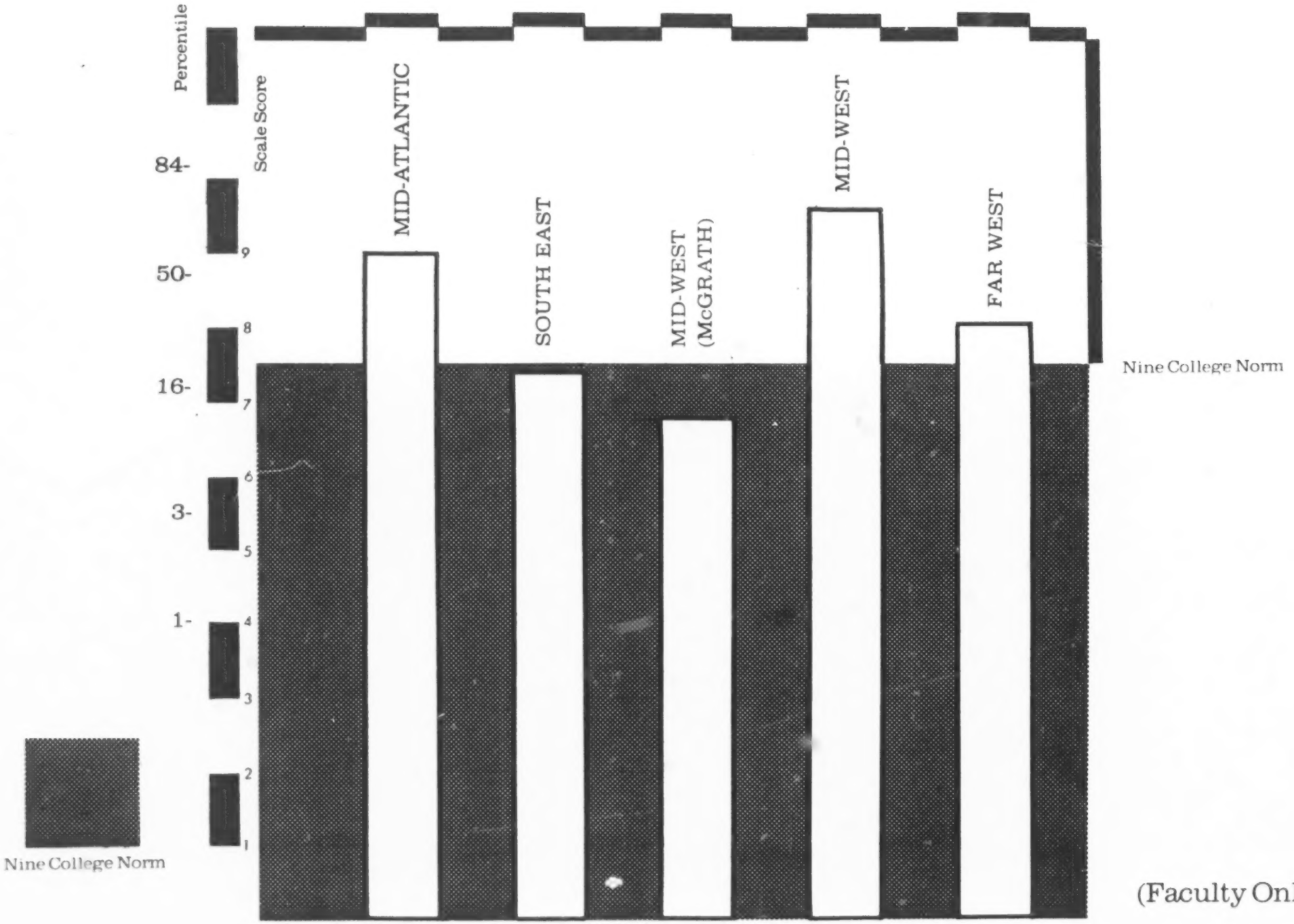

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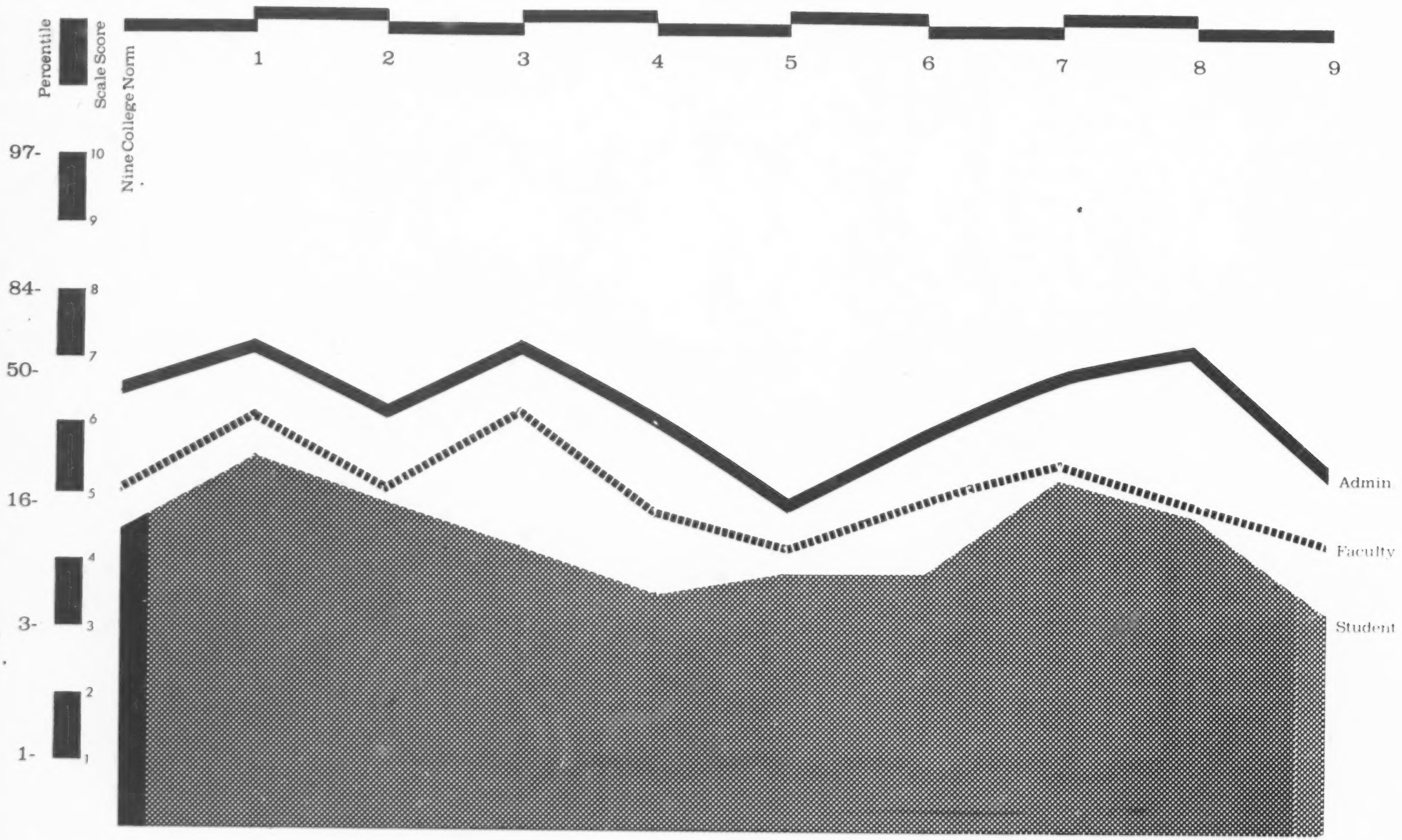
Human Diversity



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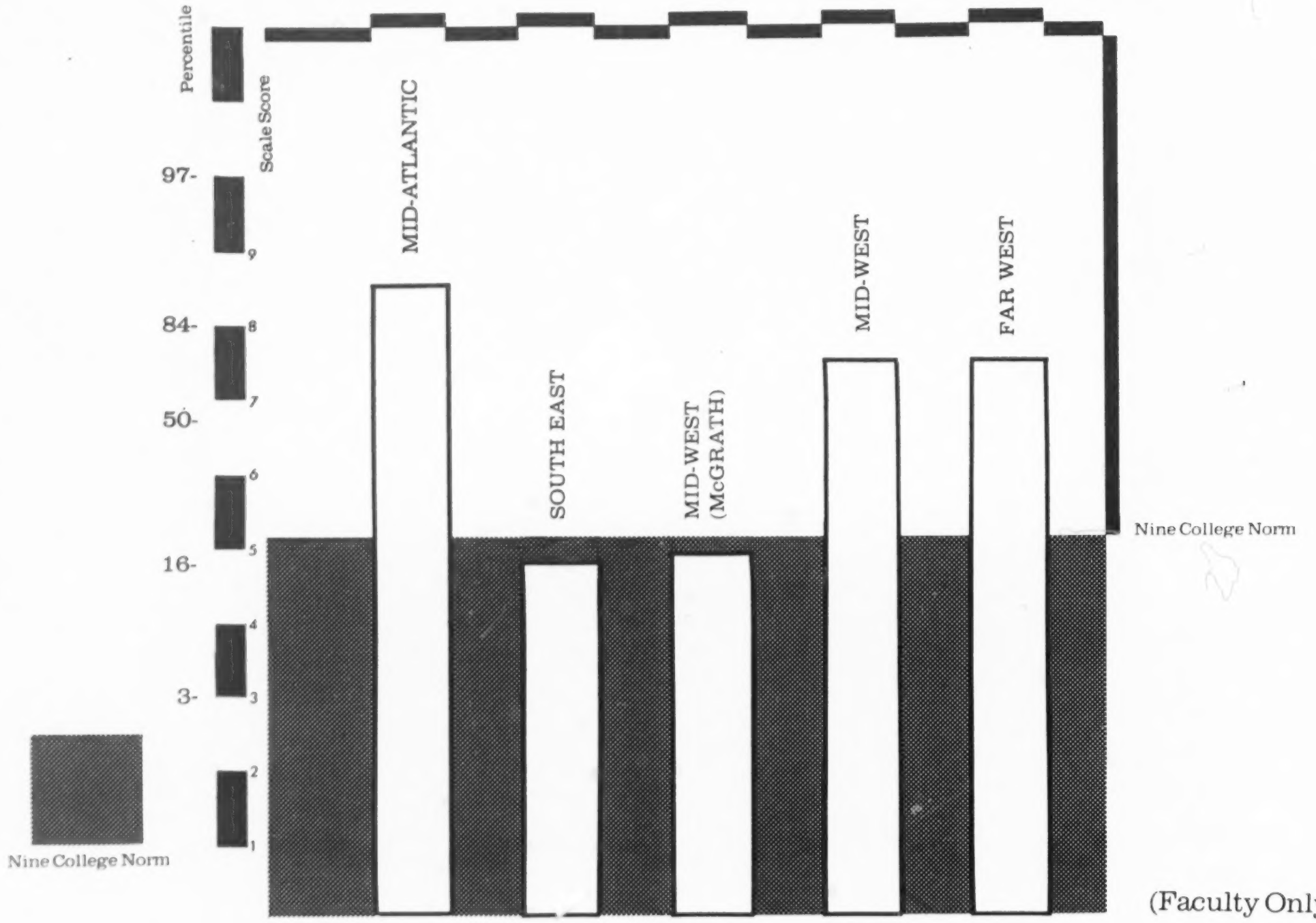

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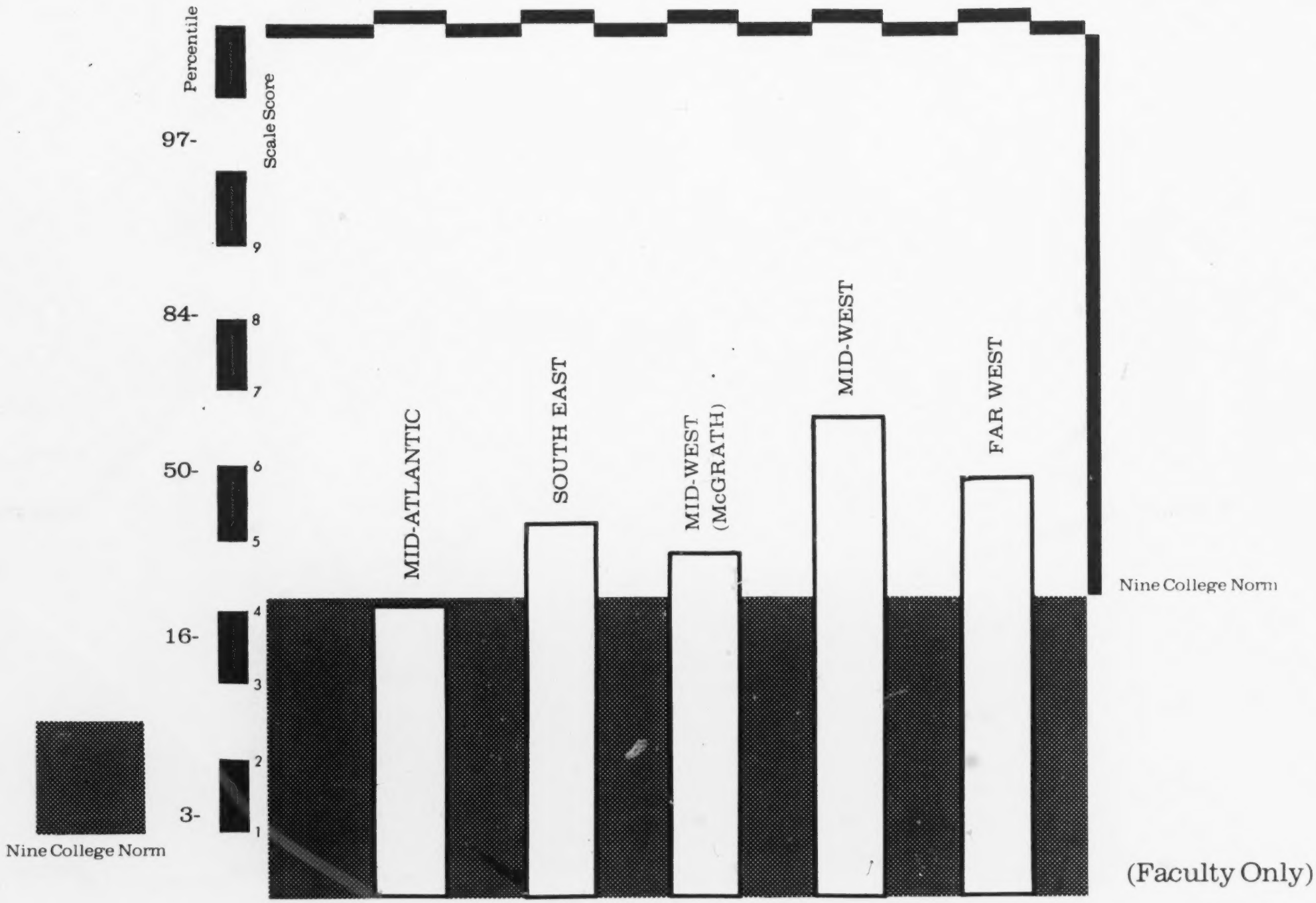
Concern For Improvement of Society

Concern For Improvement of Society



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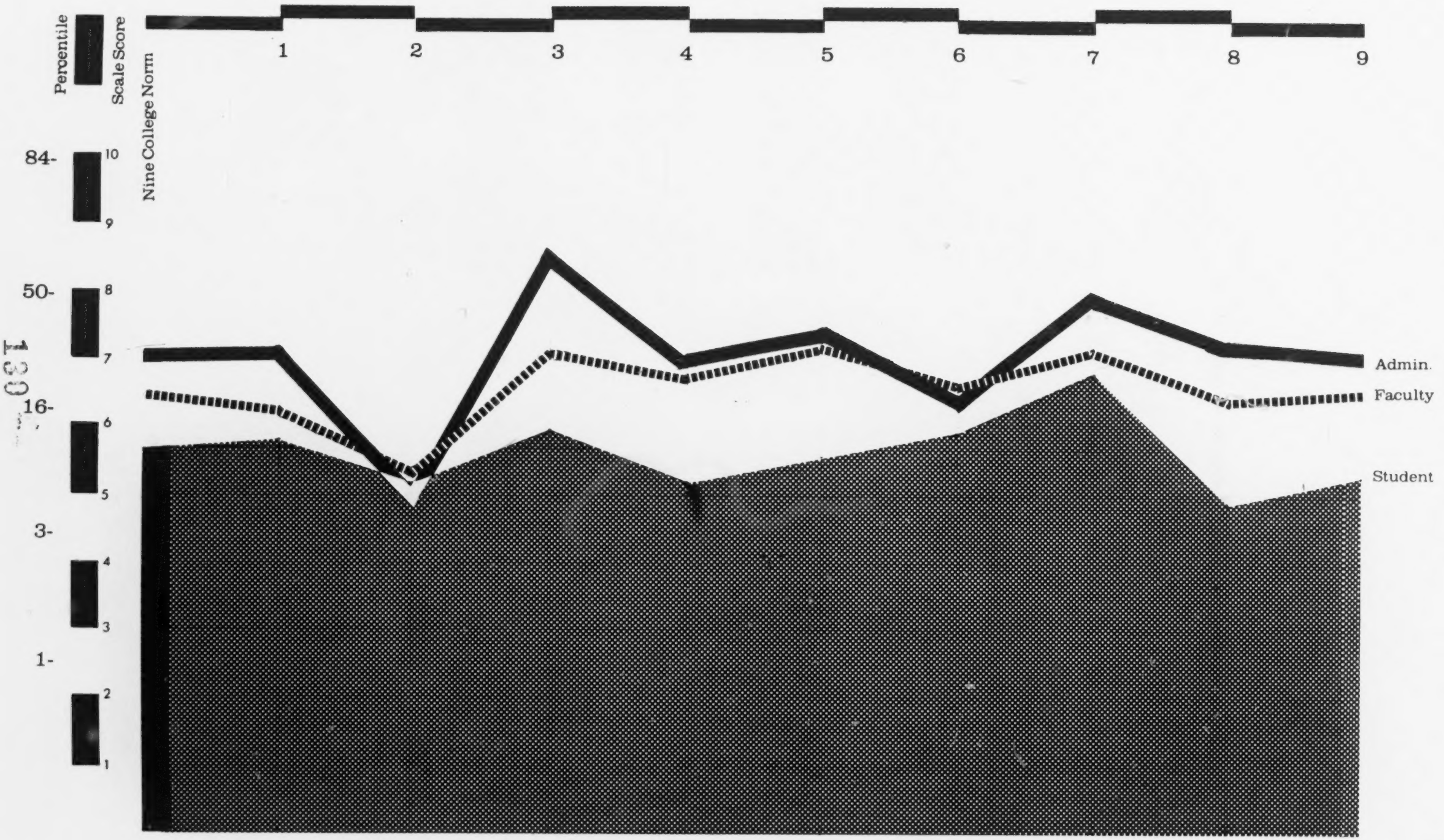

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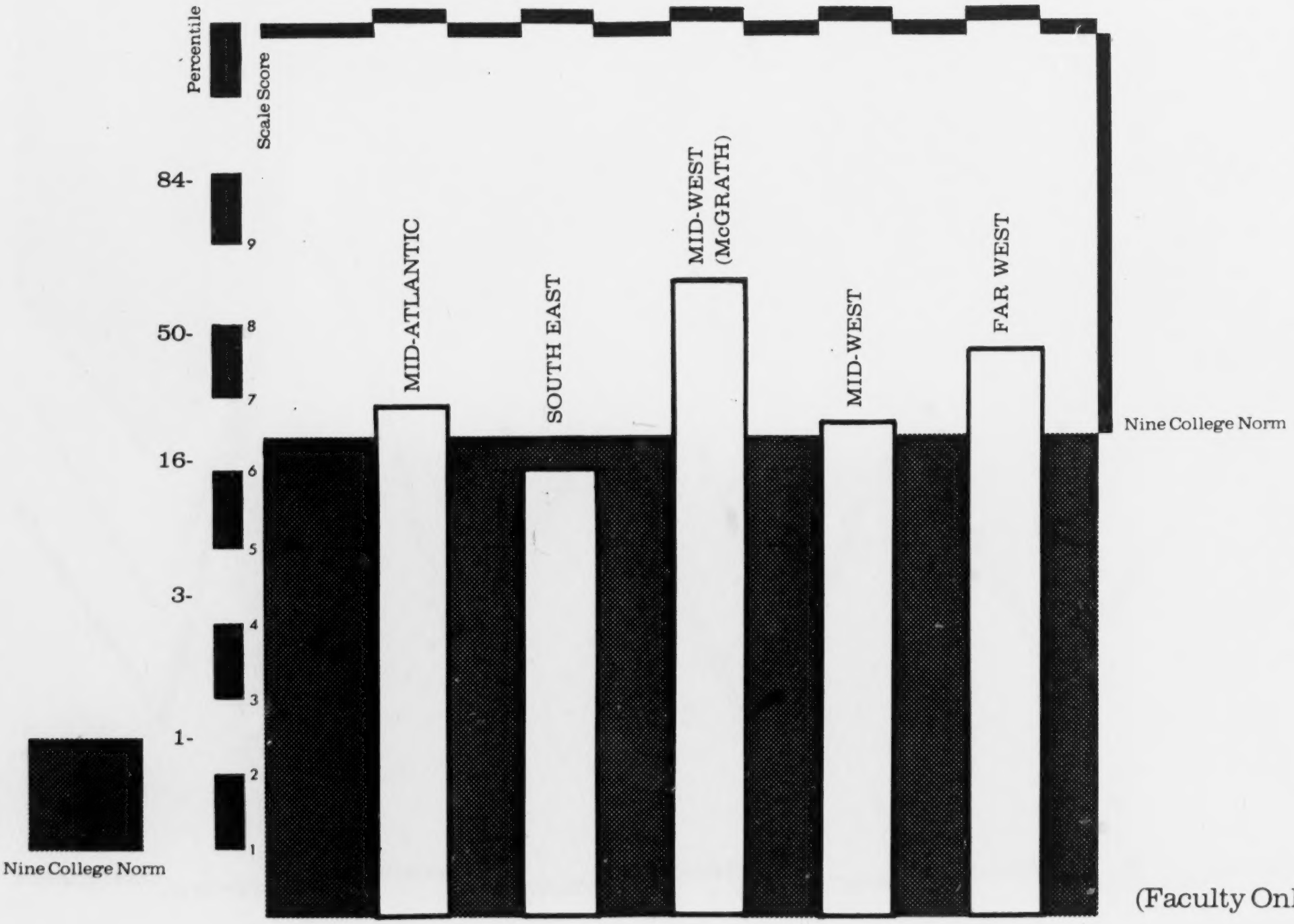

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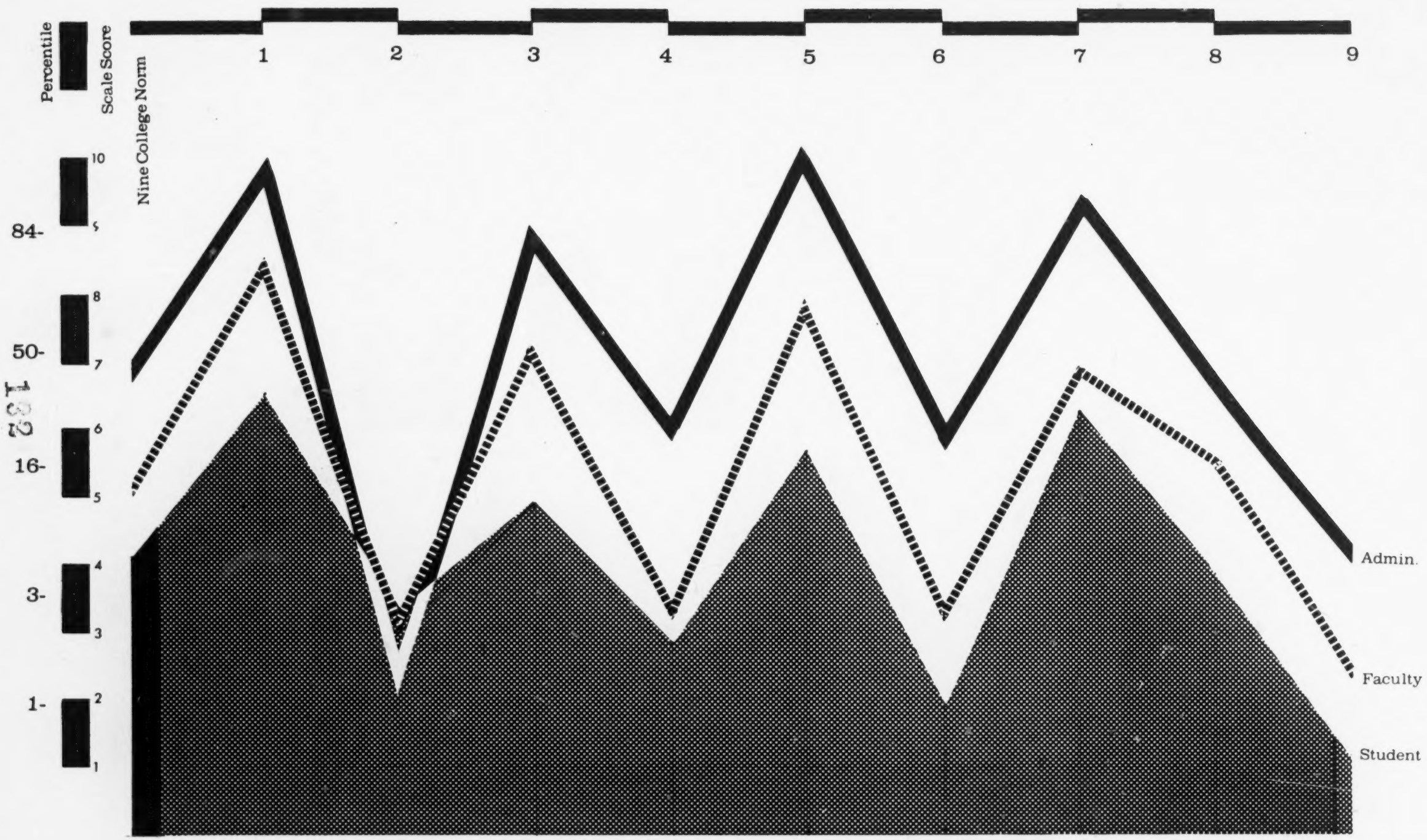
Democratic Governance



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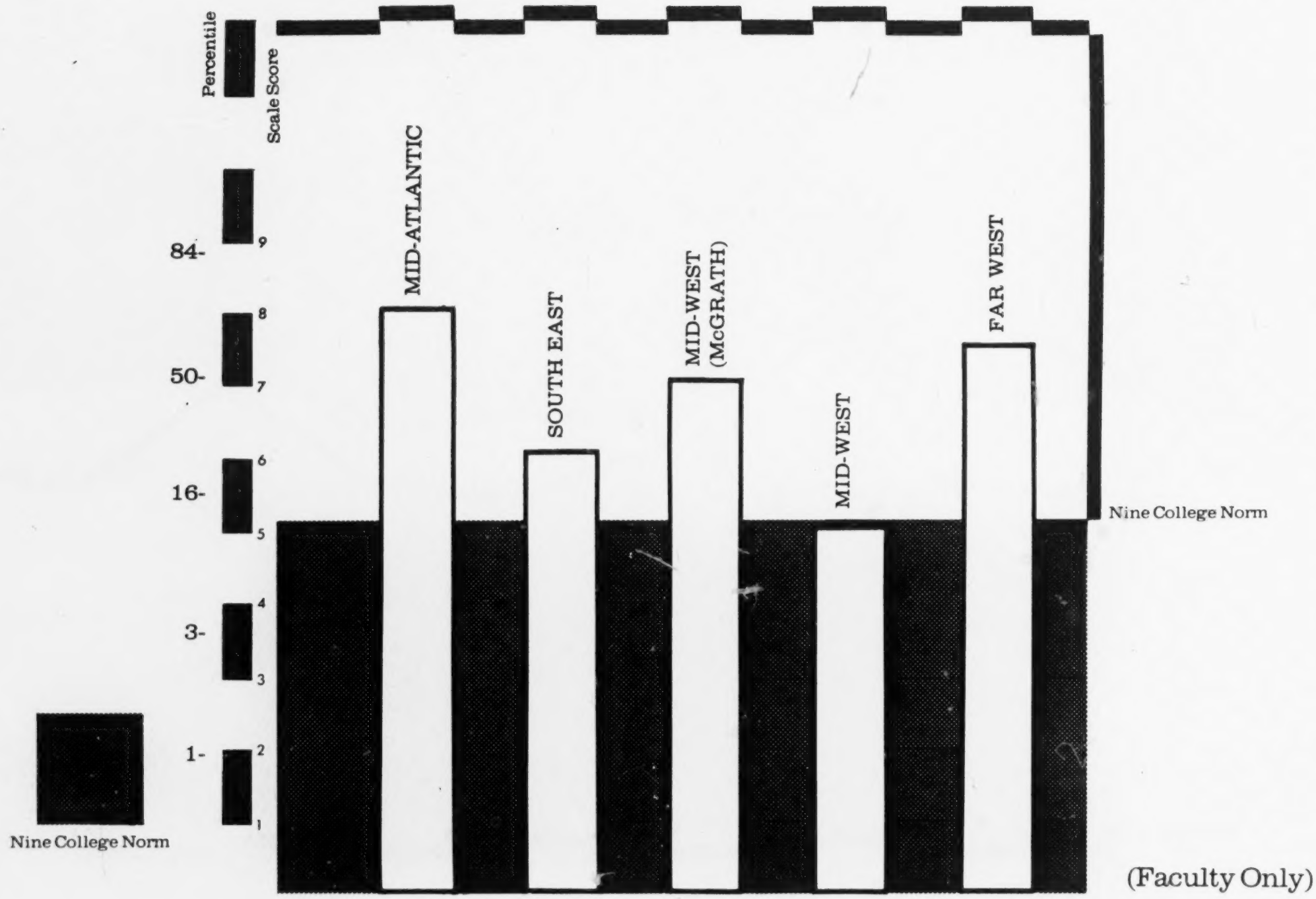

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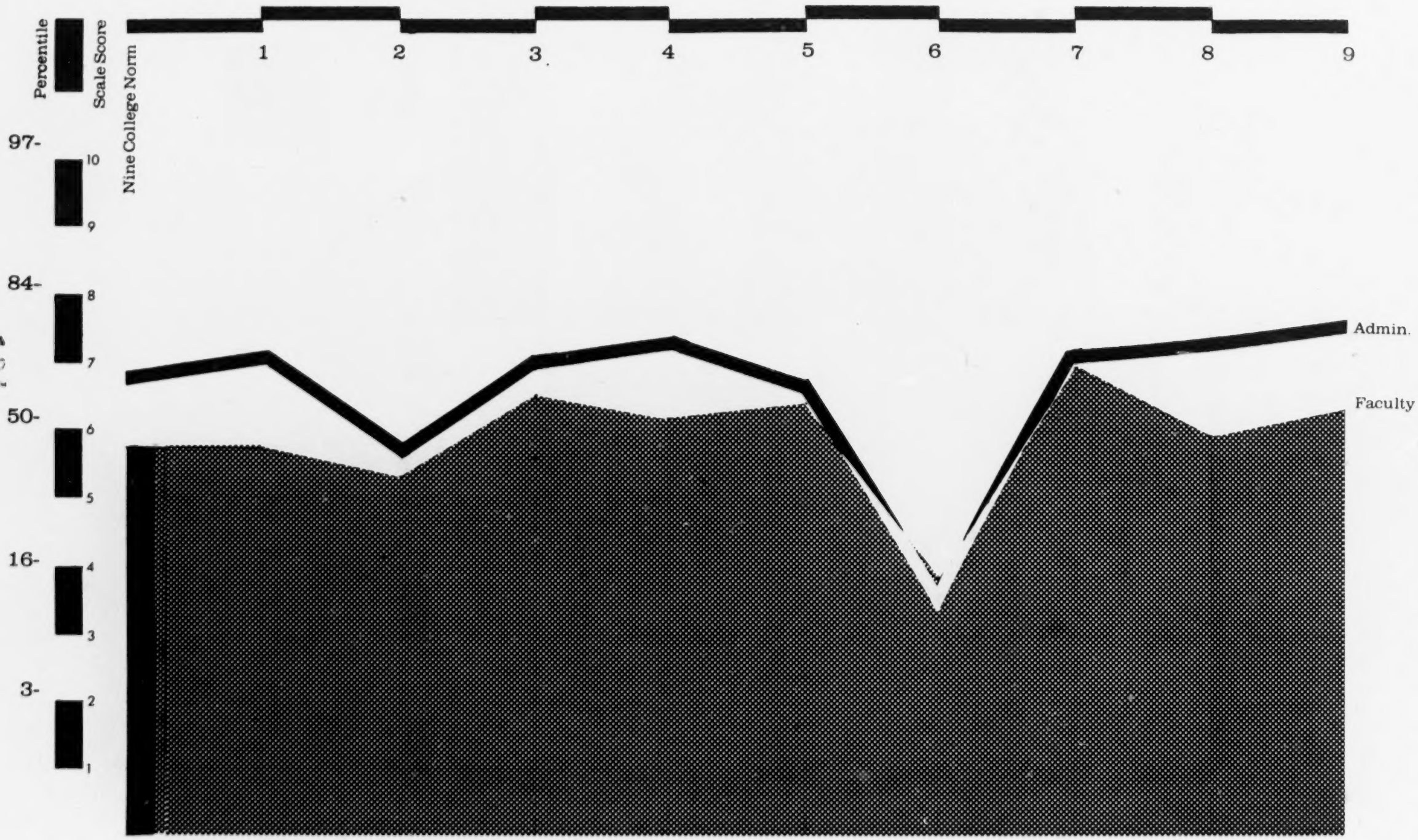
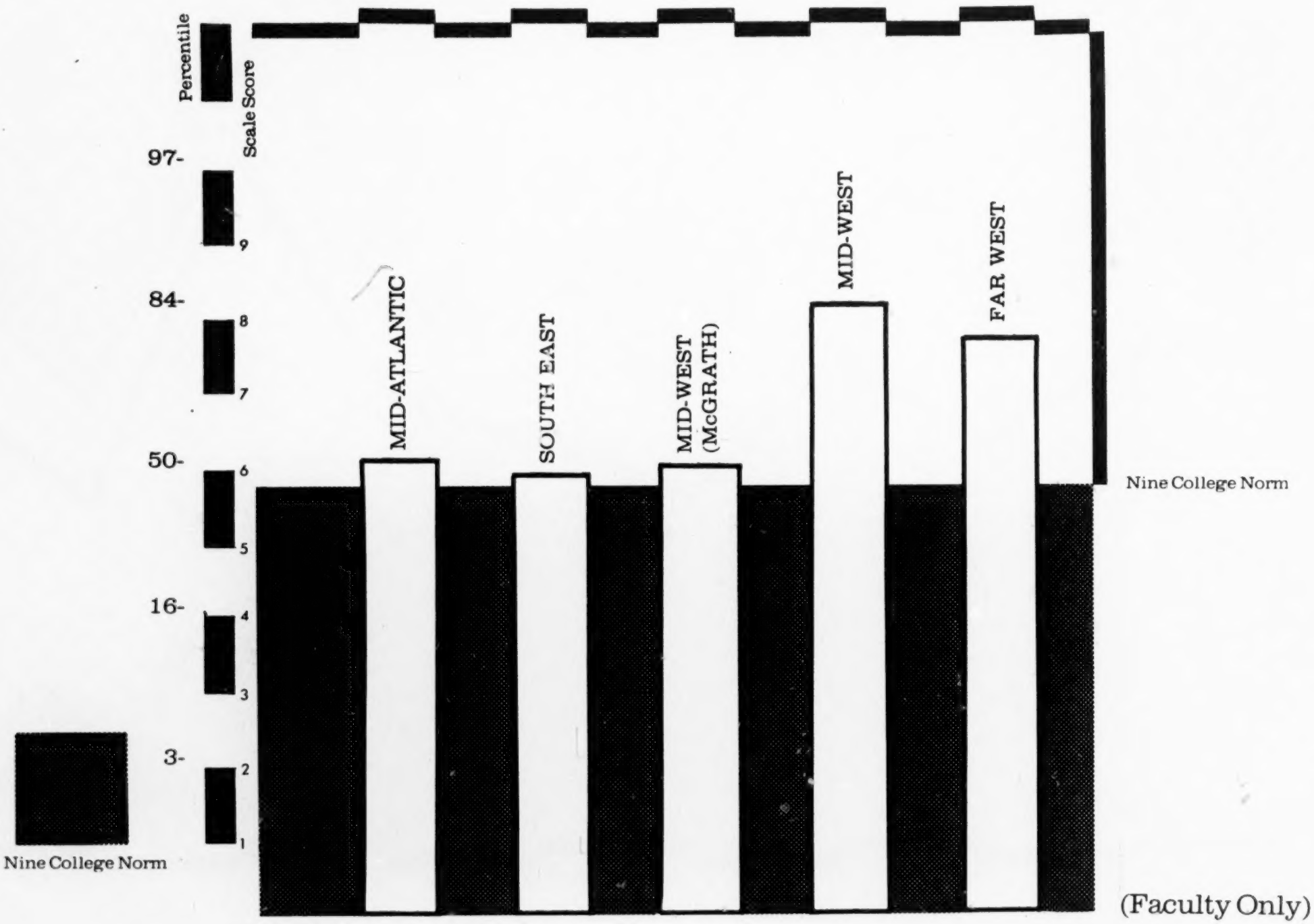
Meeting Local Needs



Meeting Local Needs



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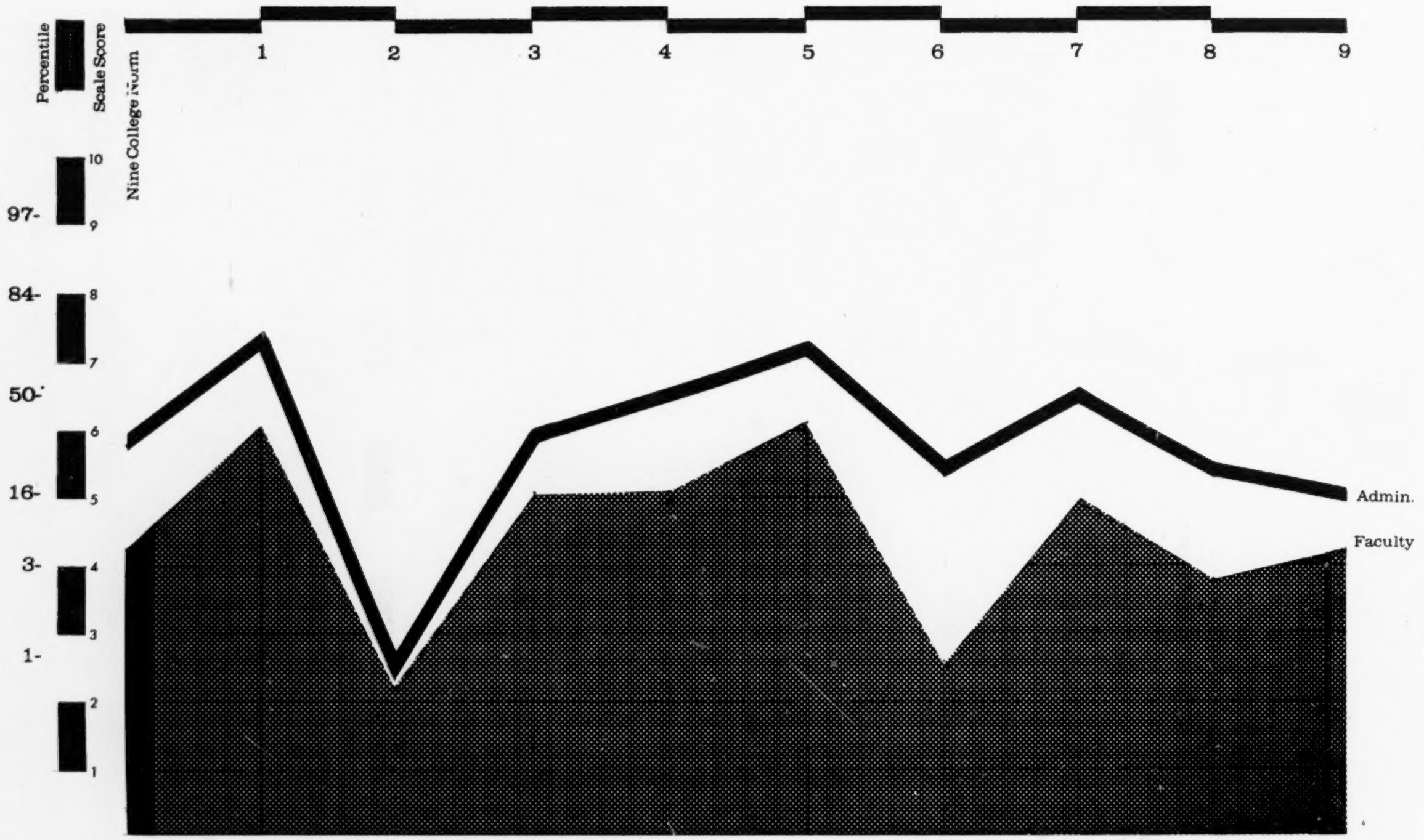

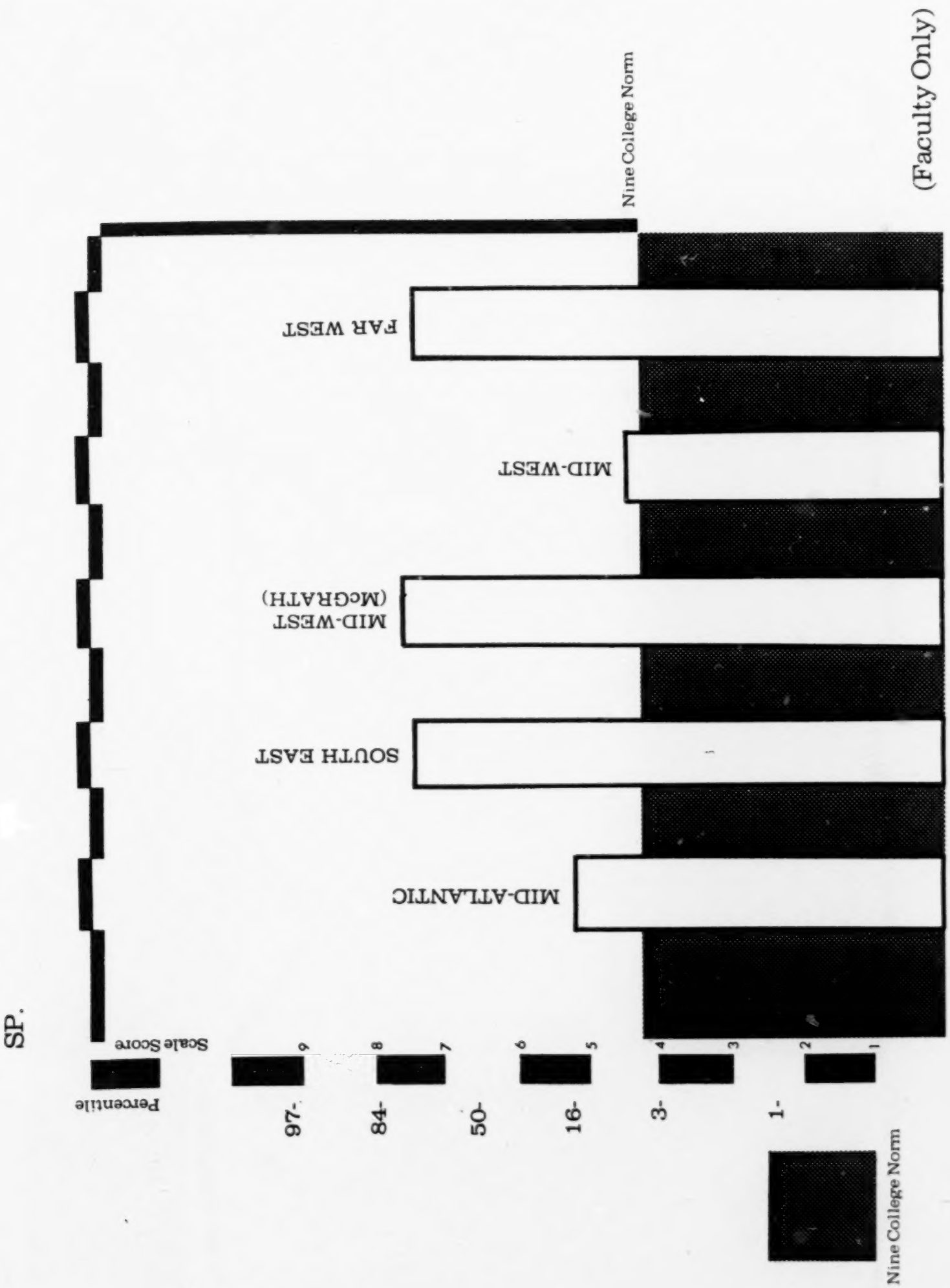
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Nine College Norm
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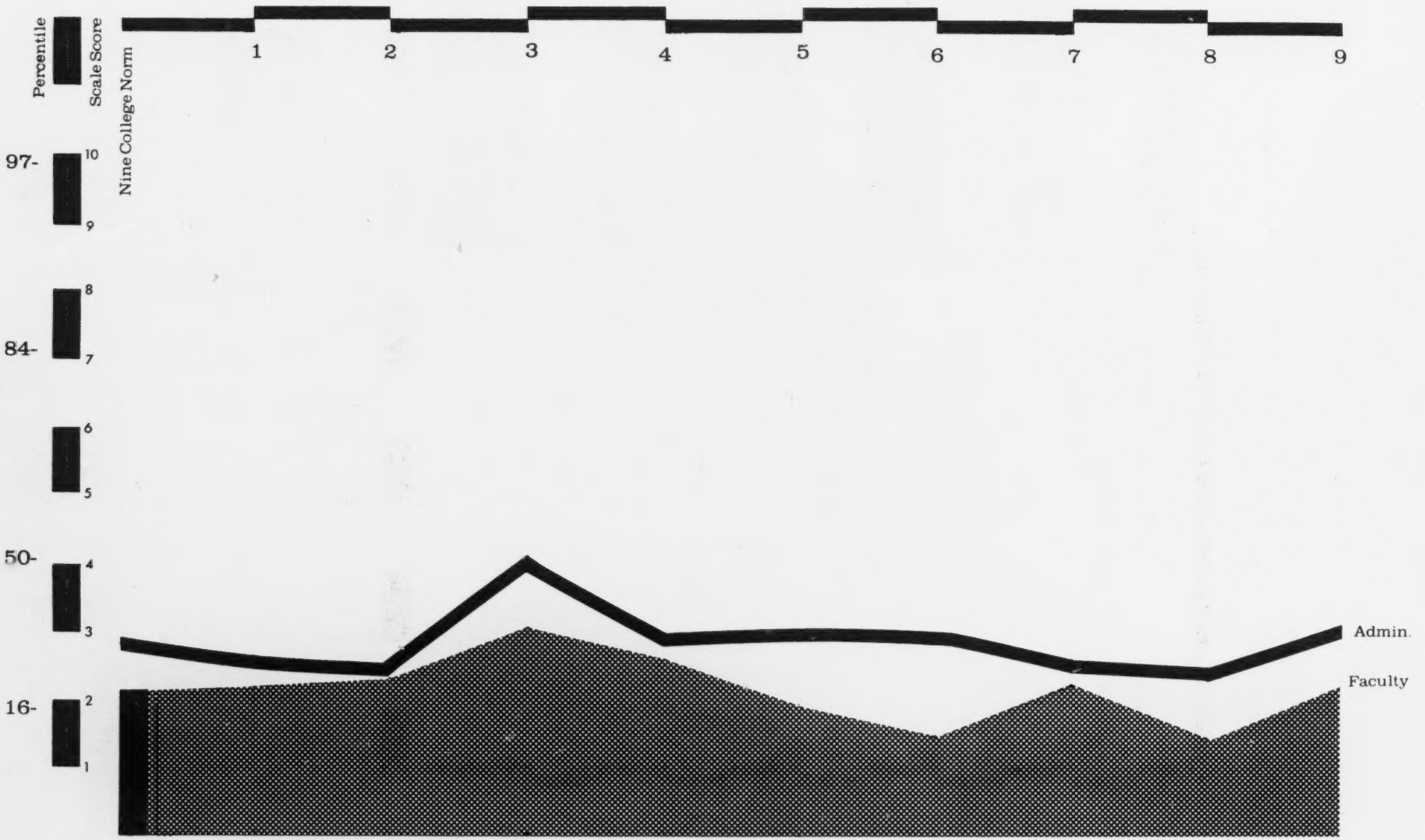
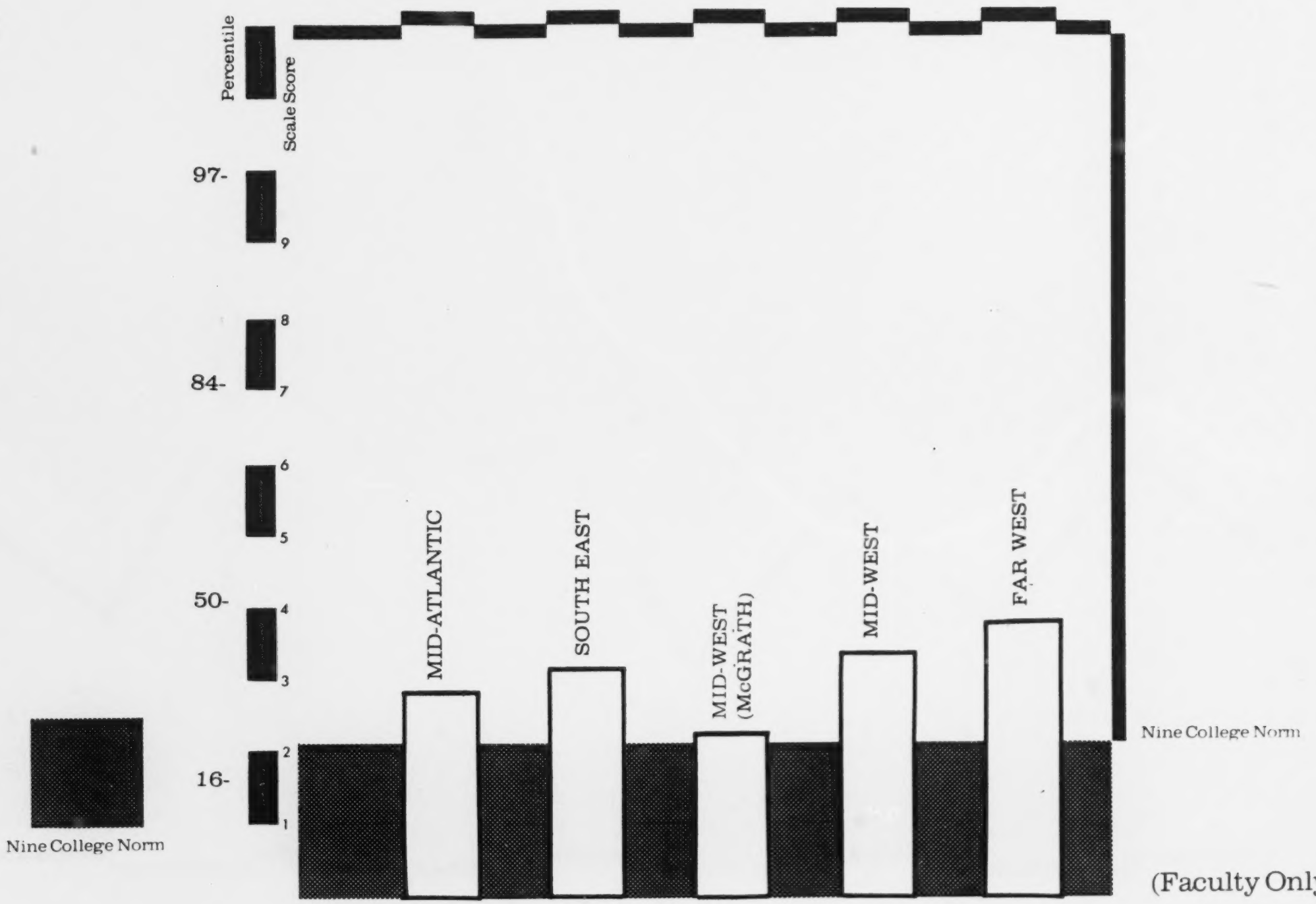
Nine College Norm

Concern For Advanced Knowledge



Concern For Advanced Knowledge



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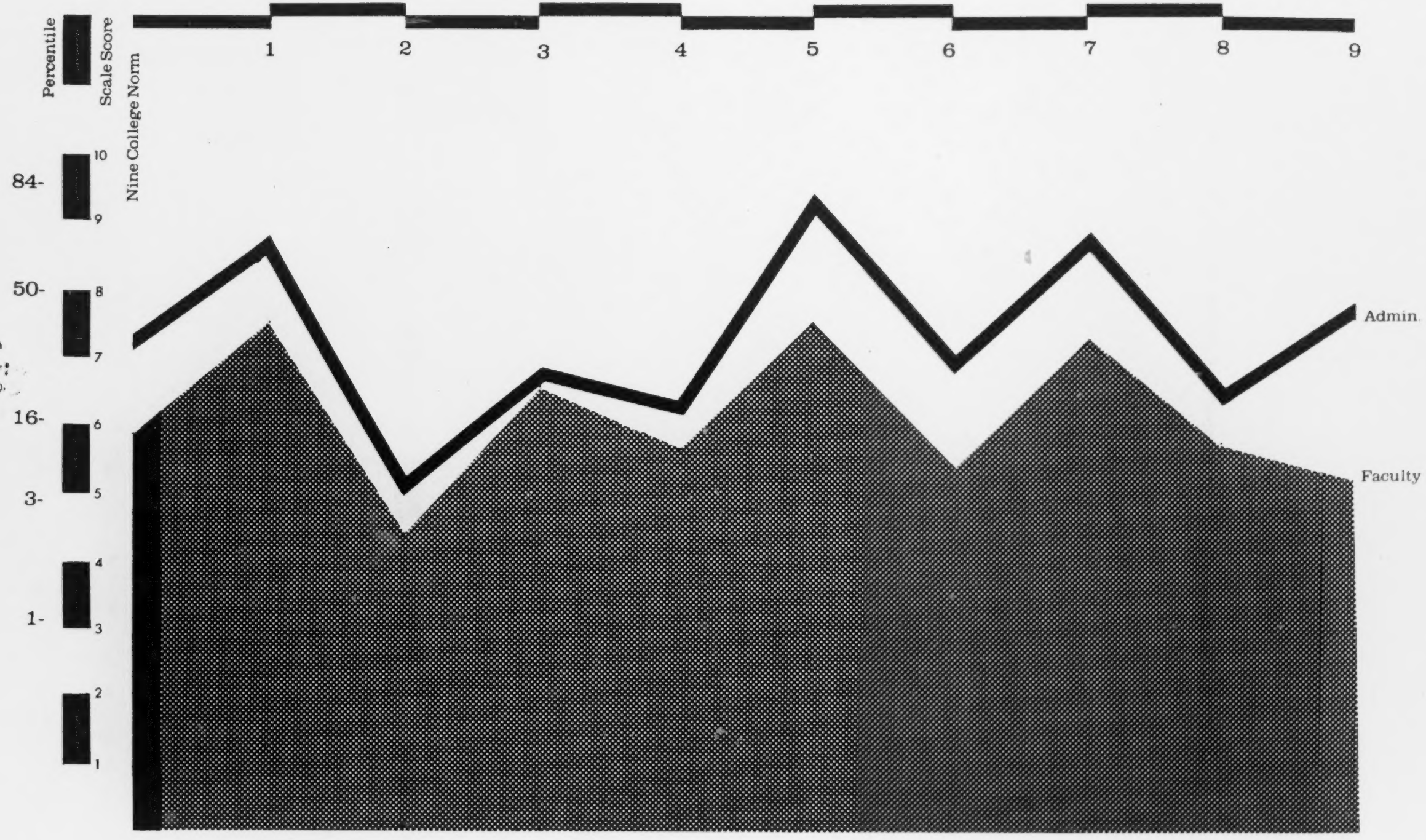
Concern For Innovation



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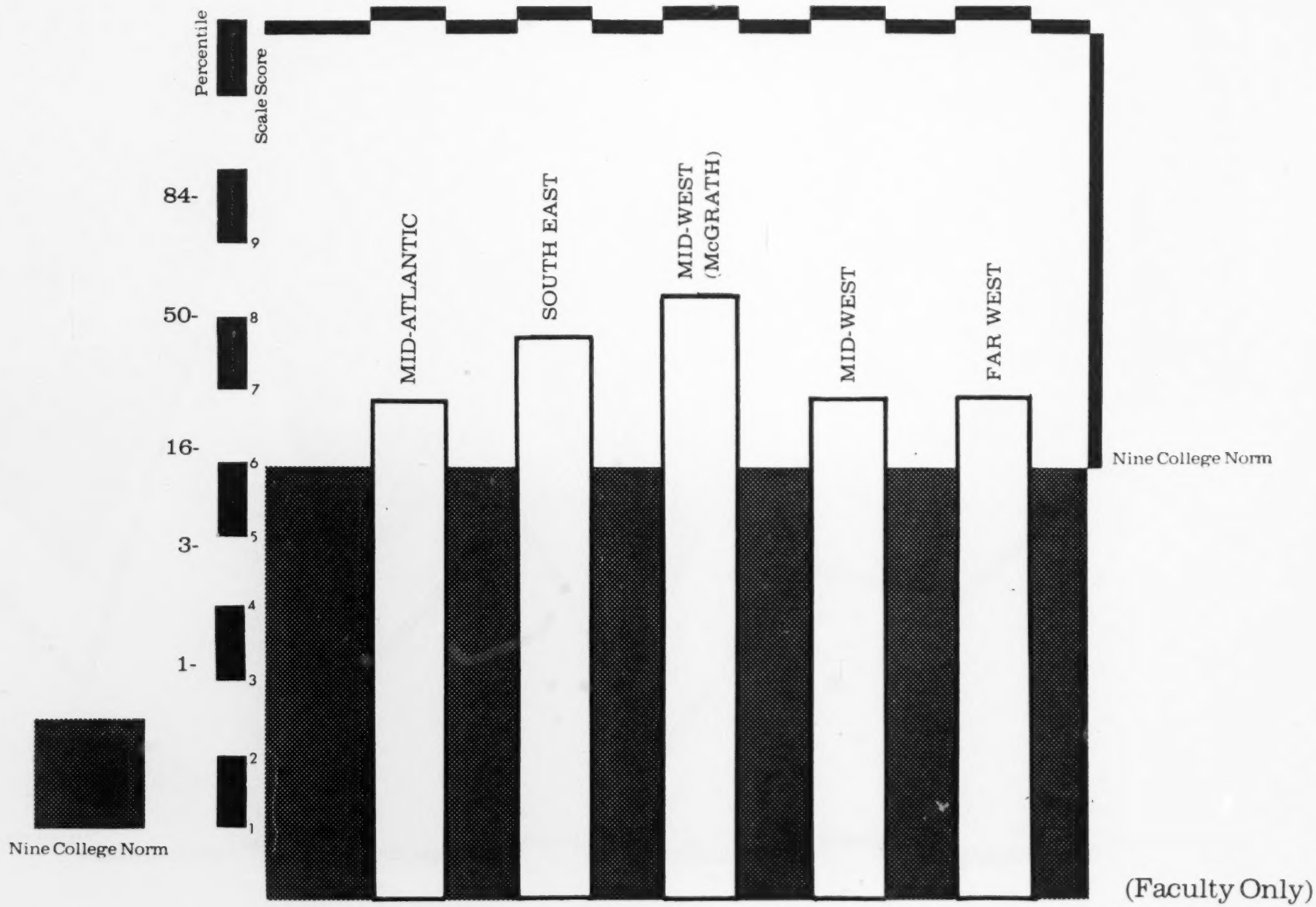

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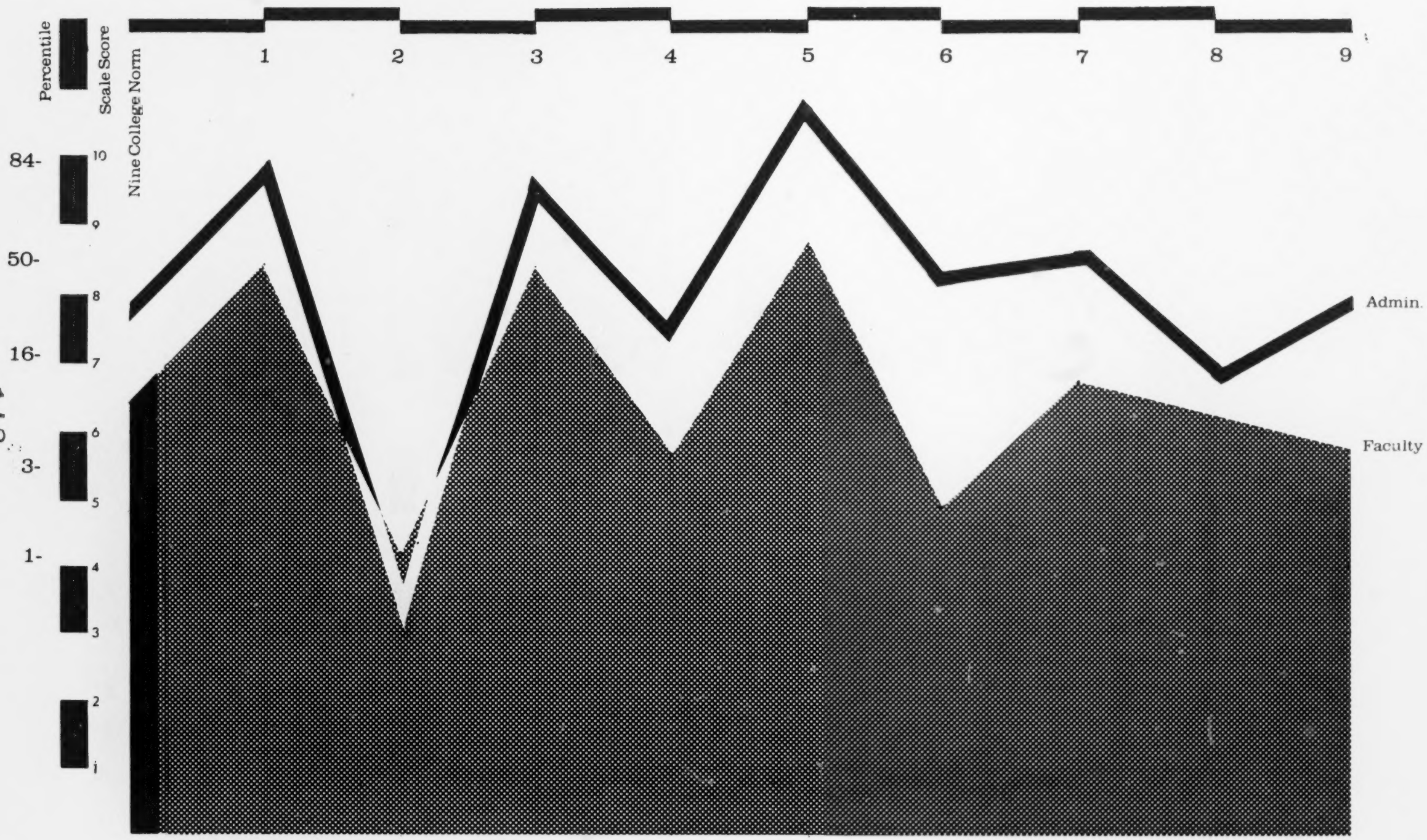
Institutional Esprit



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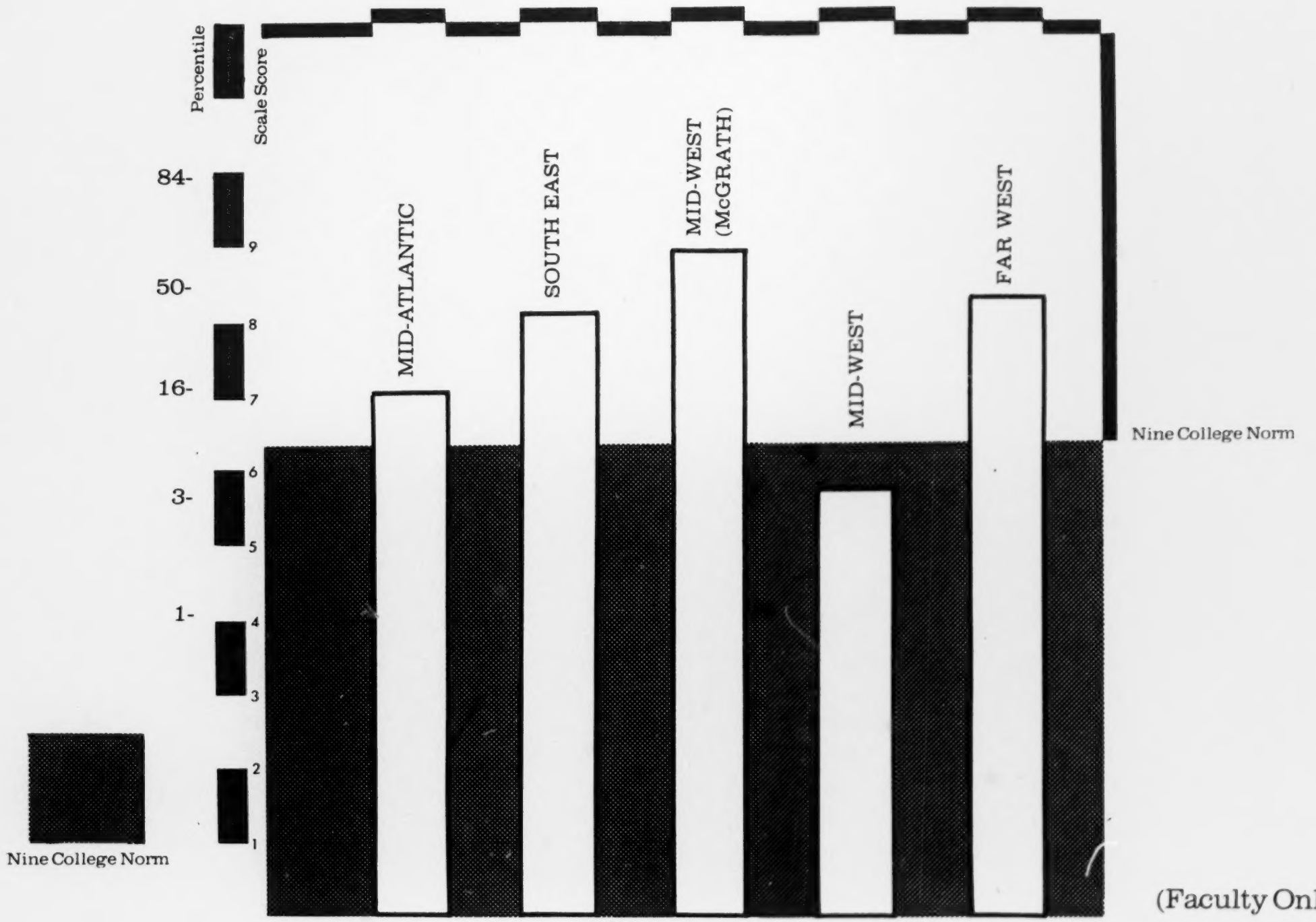
Institutional Esprit



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CHAPTER FIVE

FUNCTIONS

This report has developed a composite view of the colleges their history, a collective description of the individuals who administer, teach, and live as students in them, and the perceptions these individuals have of the institutions of which they are a part. Although there has admittedly been some editorializing by the study staff in the presentation of these descriptions, and, more frequently, attempts to expand and generalize the factual information, the attempt overall has been to let the facts speak for themselves. Where, as in Chapter Three, the judgements of the staff were a part of the description, we have tried to label them clearly. In this chapter and the concluding one, our approach is different. We are here concerned with deriving from the materials already presented our own conclusions and recommendations, and it is important that they be recognized for what they are.

This distinction is nowhere more important than in the development of a statement of the functions of these colleges. The sources and the bases for such a statement are various. The trustees of the state colleges note their Board's "commitment...to the concept that public higher education is not a luxury, but a necessity basic to the social and economic well-being of the Commonwealth and the Nation." The Willis-

Harrington law is explicit in stating that the colleges are to become both colleges for teaching and "liberal arts colleges." The catalogs of the several colleges and the materials aimed at prospective students present a more expanded and expansive view; the functions of the colleges, at least by implication, are seen as ranging from specific professional preparation for designated occupations to the provision of a general liberal arts program designed to develop a variety of intellectual attributes and personal qualities sure to stand the student in good stead in later life regardless of how he makes his living.

The review of Chapter Three of the academic programs of the colleges underscores the need for greater clarity regarding functions; our visits to the colleges and conversations with students, faculty, and curriculum officers confirmed and corroborated this need; the place of general education, of extended liberal arts education, of professional education is not clearly established because the purposes to be served by the institutions themselves are not clear.

The responses to the inventory reported in Chapter Four further illustrate this confusion of function. Most informed observers regard the advancement of knowledge less as a function of the college than of the university, with its research facilities, doctoral studies, and senior scholars. Yet the faculty and the administrators of the state colleges see this function, the advancement of knowledge, as being at

least as important in the state colleges as the development of undergraduate learning, the function almost universally considered basic to the four-year college. As further illustration, the meeting of local needs is seen by both groups as being a matter of more importance to their college than either of these teaching-learning functions.

Current Functions

To resolve this confusion, we begin with what the current functions of the colleges actually are. On this matter, there is little room for misunderstanding. Whatever the perceptions of members of the General Court, or students, or faculty, or trustees may be, it is clear that these colleges are now serving three major functions, related but distinct, and discharged at three widely separate levels of service.

The present functions we find to be:

1. To produce effective teachers for the schools of the Commonwealth. About half of the state's teachers, in elementary and secondary schools, now receive at least part of their preparation in the state colleges. To meet this continuing need, more than eighty percent of the graduates of these colleges prepare for teaching. Indeed, in seven of the colleges, a combined total of more than eighty-eight percent of the present upper-classmen plan to teach.

2. To provide professional preparation for certain other fields - nursing, business management, music, art,

marine science. Less than ten percent of the state college graduates enter these fields.

3. To provide "liberal education" to the baccalaureate level. This term includes the general pre-professional preparation of those who may go on to graduate or professional schools, as well as the general education of those who plan to terminate at the bachelor's level without specific vocational preparation. In either case, less than three percent of the graduates are served by this option.

Clearly, then, the present functions of these colleges are predominantly professional; the first purpose of these colleges is to prepare teachers; this function far outweighs in importance their second area of service, the preparation of professionals in other fields; only two or three in a hundred of the students at these colleges consider themselves primarily as students in the liberal arts.

In an important sense, however, this classification of function may be misleading. Since the three functions are listed as distinct, or since the goal-points and career plans of the three groups of students may be different, this classification suggests that programs to serve these purposes must be entirely different from each other, that these functions of the college must be mutually exclusive. This is not our intent. We do not suggest such a separation between liberal arts education and professional studies, or that courses in the professional education program cannot be, in fact, liberal education. Indeed, we would argue that the liberal arts

component of a program of professional education must permeate all parts of the program, that teachers and nurses and other professionals need to be broadly educated as well as professionally equipped, that these elements of their education are inseparable, and that the function of their colleges is therefore that of comprehensive liberal and professional education.

The comprehensive state college is a relatively recent development in American higher education. It emerged as a result of the stronger institutions among the state teachers colleges accepting responsibility for additional functions and more comprehensive programs. Much as the land-grant colleges had pioneered in an earlier day, the comprehensive state colleges developed their distinctive character by merging professional and occupational preparation with the best of the liberal arts tradition. Elitist university education, both in Europe and in this country, has been characterized by a disdain of manual activities that traces back to the classical Greek academy. The result has been to isolate intellectual pursuits from their social context, and to suggest doubts about the academic respectability of education for the professions. The institution which fully prepares teachers has already resolved this false distinction by its combining of the liberal arts with professional preparation in the one field; it is therefore in an advantageous position to move itself toward the broadened role of comprehensive state college.

Future Functions

This pattern of development of the stronger state teachers colleges elsewhere assumes special significance as we project the future functions of the state colleges in Massachusetts and assess the potential for their development. In the discussion of those future functions, it must first of all be clear that these colleges cannot abandon their historic role as the major suppliers of the State's teachers. These colleges prepare about half of the elementary teachers and about one-third of the secondary teachers. Even though current reductions of school budgets have tightened the employment of new teachers, Massachusetts has an accumulated shortage of teachers and this shortage will persist. Stiles estimated a deficit in 1968 of over nine thousand teachers and projected an additional annual requirement of almost fourteen thousand new teachers, following the formula of the Willis-Harrington Commission.[1]

On the basis of projected future enrollments of students in the state colleges, these colleges, in order to continue to provide the same proportion of the State's new teachers that they now do, will need to continue almost the same high proportion of their students in programs of teacher preparation, about eighty percent. This condition will hold true until at least 1975. In the two or three years after 1975, the State's

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[1]Stiles, L.J. Teacher Certification in Massachusetts: Status, Problems and Proposed Solutions. Report No. 1, Massachusetts Advisory Council on Education, June, 1968. Other sources of the figures used in making these projects, and the rationale in developing them, are contained in the working papers of the study.

demand for teachers is expected to level off somewhat, and the number of teachers prepared in the state colleges should increase only slightly year by year, thereafter. If the presently planned increases in enrollments in the state colleges are realized, the additional numbers of students will need preparation in the state colleges for alternative career choices in addition to teaching. By 1980 the annual increments of increase in enrollment should be almost completely provided for in alternate programs. In 1975, the state colleges will graduate about 5600 teachers with baccalaureate degrees; the annual need in 1980 from the state colleges will not exceed 6000.

These projections are subject to refinement and interpretation and to disagreement in detail; they do not distinguish between elementary and secondary teacher demand, nor differentiate among the teaching fields at the secondary level. Our concern is not to make detailed projections of teacher demand. From the rough figures already developed two implications are inescapable for the projection of future functions of the state colleges:

1. At least until 1975 or 1976, and probably for two or three years beyond that, it will be essential to the State's supply of new teachers that the state colleges, as they increase their enrollments as planned, maintain approximately the present proportion of their students interested in preparation for teaching.

2. Beginning with the class entering in 1975, these colleges will increasingly become comprehensive state colleges, as they assume additional functions and develop additional programs preparatory to other professional fields.

To maintain the present proportion of their students preparing for teaching, while their total enrollment increases approximately fifty percent, does not mean merely business as usual for the state colleges. The programs for preparing teachers will need to be made more attractive; many career decisions are made less on the choice of profession than of the program which prepares for it. The major effort and resources of the colleges will need to be directed at upgrading the programs for teacher education. Tempting as it will appear, to divert the resources of these colleges to the development of other professional preparation in these years would be a disservice to the Commonwealth.

The best efforts of all the colleges in the years immediately ahead should be addressed to the task of strengthening and improving programs of teacher education. As has already been indicated, this task on most of the campuses merits real attention. Many of the colleges are still not fully accredited by the national accrediting authority in teacher education. Many are still characterized by programs and procedures no longer acceptable in modern teacher education.

Three major premises are implicit in these projections. First, the program of general education in the arts and sciences, as the common core of the program of studies of the comprehensive state college, will constitute about half of the four-year program for most students, and for most students will fall largely in the first two years. Such a plan not only postpones the necessity for irreversible decision about careers until the student has had opportunity in the first two years to sample fields and programs and arrive at responsible career choice. It also, by concentrating professional specialization in the upper two years, permits the college to be more flexible in adapting to needs for additional professional programs; it cuts the turn-around time from four years to two. Indeed, it is understood that this was the rationale for the Willis-Harrington Commission's recommendation that the state colleges become also liberal arts colleges; the provision of strong programs in the arts and sciences in the early years of study permits greater adaptability to changing needs for professional preparation.

A second major premise is that, beyond this common core of work in the arts and sciences, not all colleges will offer advanced undergraduate or major studies in all fields of the arts and sciences. Considerations both of economy and of educational excellence argue for this differentiation of function among the colleges. It is accepted that all colleges should not offer a professional teaching major in music, for

example, although all should offer the basic work in music, properly a part of general or liberal education. Similarly, not all colleges should be equipped and staffed to offer major studies in each of the sciences, nor the modern languages, nor a professional major in the whole range of the social sciences. Four faculty members in biological sciences would find themselves hard-pressed to offer a full program for majors in the field; the field itself is commonly held to have five major branches, each of which should be represented by a specialist if majors are to be prepared. Similarly, five or six faculty are unlikely to represent in their specializations all the principal branches of the fields of chemistry and physics, even before we added geology, geography, astronomy, atmospheric science, and others. Yet five colleges have ten faculty or fewer to offer instruction across all these fields. To develop a broad program in business and business education, as Salem has done, probably requires a faculty of twenty or more, as they have, and should not be attempted everywhere.

The third premise proceeds inescapably from the other two; to make advanced work available in all the fields to all students requires free access among the various campuses. As was suggested in the earlier discussion of curriculum, a student at one college may need to spend a day in a library at another campus, a week in an advanced laboratory at another college, or do an individual reading course or

special project under the guidance of a faculty member with a particular specialization at another campus. Indeed, a student who develops a major interest in an advanced field not available on the campus at which he begins, may wish to transfer to another campus to pursue his studies. Statewide planning would distribute the specializations among the colleges to minimize the problem of travel distance from home. Even those colleges without residence halls now have significant numbers of "resident" students living near the campus: even now, one graduating student in three began study at another campus.

In short, all these colleges will continue to address themselves first to the strengthening of programs for the preparation of teachers, then to the development of programs leading to other careers. All will develop strong basic programs across the fields of the arts and sciences, but not all the colleges will travel exactly the same road, nor end up with identical programs, nor will everyone attempt to do everything. Students will have free access, short-term or longer term, campus to campus, to have available the full curricular resources of the statewide system. As each college develops its own centers of excellence, exploiting its own strengths and building upon them, the level will be raised of the total offering across the state for all students.

CHAPTER SIX

SUMMARY AND RECOMMENDATIONS

Since the inception of this study over a year ago two major developments have changed the climate in which the state colleges operate. The first is the clearly evident change in policy regarding the functioning and financing of a central statewide coordinating office for the state college system. Although this office was established when the colleges were recognized as a separate group of institutions, it was never granted sufficient staff or operating budget to be much more than an office of record. With the appointment of a Provost of the State College System within the overall framework of higher education in the State, and with the expansion of his staff within a year to more than thirty members, this office is now in a position to gather data as a basis for decision-making, to coordinate the leadership of the colleges, and to do for the Board of Trustees of State Colleges the staff work necessary for that Board to function near the level of its potential. The second major development is the growing recognition, expressed in important public statements, of the Governor and the legislative leaders that the system of state colleges in Massachusetts not only needs but merits their attention and support.

Both these developments are of real importance in making possible direct action to achieve the objectives already outlined in earlier sections of this report. Expressed as three mutually-supporting goals, these summarize the major impediments to be overcome in the fuller development of the state colleges.

1. Clarity of function

Attainment of clarity regarding function has been stressed throughout the report as an urgent goal. In its accomplishment all have a part - the students, faculty, and administrators of the colleges, the Council of Presidents, the Provost and his staff, serving the Board of Trustees of State Colleges, the Chancellor and his staff, serving the Board of Higher Education, the Governor and the General Court, representing the people of the Commonwealth.

This clarity as to function is essential to resolve the present ambivalence regarding undergraduate and graduate education, and the present confusion regarding the place and function of the program of general education in the arts and sciences; it is necessary as well in order to resolve the idea that the state colleges are now - or should strive to be liberal arts colleges.

Agreement as to fundamental goals and functions will be achieved only with wide participation and wise leadership, through full discussion and reasoned agreement, by rigorous re-examination of the colleges as they are and imaginative projection of what they may become. It is not enough to say they should become liberal arts colleges. Framingham is not another Wellesley, but a good college in its own right; nor is Bridgewater another Wheaton, nor should either attempt to mimic its academic neighbor. The liberal arts college is distinctively a New England institution, and a great one, but the Commonwealth at this stage of its educational history needs another Williams or Amherst College less than it needs the comprehensive state colleges; these will serve the needs of its citizens - able young men and women who need not only "a college education" in the sense of cultural development and maturation, but need no less in the undergraduate years realistic preparation for a profession of their choosing. These students are characteristically from homes in modest circumstances; they look forward, characteristically, to the socially-motivated, service-oriented professions; they will be teachers and nurses, social service workers, leaders in urban centers, business executives, recreation directors, hospital administrators, and the like. They seek now and will continue to seek programs which combine a vision of the life of the mind with a grasp of the essentials

for making a living. This can be a very good education indeed, academically demanding and professionally motivated - in a real sense the people's college, the comprehensive state college.

2. Precision of needs

The need for clarity of function just described is perennially reflected in confusion regarding the real needs of the colleges for support. The Legislature, we believe, has been strongly supportive of these colleges; it has, in spite of a lack of clear information about their needs, treated them well in appropriations. (The faculty salary schedule, for example, compares very favorably with those of the leading state colleges across the country.) Yet the colleges are in continuing financial need, not because of mismanagement, but because they chronically need money for important services. Money is needed for practically all those services which support the work of the faculty - the clerical and laboratory and library and maintenance and record-keeping and counselling and administrative services, for example, that help to make the professor's work effective. To pay a professor well and then have him spend his time typing stencils for course materials is a double extravagance, not a saving of clerical salary.

This lack of clarity as to function has rendered difficult if not impossible the precise statement of needs, a realistic assessment of the resources necessary to achieve clearly stated goals. The Legislature, regardless of how supportive it may be, then, lacks the information basic to intelligent appropriation. The presidents of the colleges, seeking desperately-needed resources, are tempted to base their appeal on attractive gadgets - a new program, saleable new ideas, novelties, to support their case. It is often easier to describe a need for a new facility than for an added service or the enrichment of a program. The need for clarity of purpose is reflected in the distortion of graduate programs to make them pay for themselves and carry additional financial burdens. It leads to the development of two systems on a campus, the money-getting system centered in the president and the educational apparatus centered, perforce, in some other academic officer.

The rough dimensions of the fiscal need are readily determined. Massachusetts appropriated (1969-70) approximately $1200 per year per student in the state colleges, ranging from $1,009 to $1,498 on the different campuses. This is offset by a tuition of $200 per student. The comparable figure in New Jersey is $1,971 and in New York, $1,848. In 1968 California reached

$2,000 per student. It is expected that the Massachusetts appropriation per student will not reach this level until 1974. The need is real; it needs to be described precisely and specified clearly.

3. Unity of purpose

Unity of purpose does not suggest uniformity of program, but the need for a systematically planned approach to the educational problems of the state as they are served by the state colleges. A realistic plan for differentiation of function among these colleges to meet needs better, a schedule for the development of alternative career programs at the several colleges, a program for the free access of students across campus lines - these would reflect the sense of unity of purpose. The major effort is common; all campuses need to strengthen their programs in teacher education and develop strong programs of general education in the arts and sciences. They can be of mutual assistance and support in these efforts. Their major purposes are still common, as each develops additional professional programs within a coordinated statewide pattern. These purposes need to be conceived and pursued within the established framework for coordinating all the state's efforts in higher education, the office of the Chancellor and the Board of Higher Education. Within this context, and acting together, these colleges can with distinction serve the needs of the State.

Recommendations

The strengthening of a system of complex institutions involving thousands of human beings served by the resources of the Commonwealth, is a task not readily reduced to a neat list of specific recommendations. Much must depend upon the degree to which this report has communicated a posture, developed in the reader a point of view, a set of attitudes and feelings about these colleges and their great unrealized potential. The recommendations which follow can only be suggestive and symptomatic, representative of constructive efforts designed to facilitate the strengthening of these colleges. They are grouped under four headings.

1. The Operation of the Colleges as Teaching Institutions and Their Academic Programs.

a. Strengthen programs of teacher education on all campuses. This will involve, for example, symposia for faculty, with national leaders dealing with such problems as curriculum building and campus governance. These would be followed by workshops on each campus, to make local and specific

applications of ideas developed at the larger meetings, followed in turn by a program of campus intervisitation, the development of faculty resource leaders in major fields, the planned participation of students, especially at the campus level.

This program should be implemented by:

1) curricular revision, not standardized statewide, but designed to encourage experimentation and to develop innovation,

2) the use of recognized modern methods and procedures to surmount limitations of campus curricula and resources,

3) utilization of student experience, both as undergraduate and in the field,

4) the development of a strong core of general education in the arts and sciences,

5) a progressive abandonment of the practice schools and the practice school concept, keeping a few of the existing schools with limited staff and programs as child study centers,

6) early and direct attack upon the problems of graduate and continuing education at the colleges. This is complex and urgent; teachers in service need access to advanced courses; many of the colleges cannot now mount a true graduate program. The decision must be made campus by campus to strengthen or to terminate the weaker programs. Strong central coordination and courageous campus policy need to be combined.

7) move as rapidly as funding will allow toward the development of graduate education programs fully funded, staffed, and administered

B. Develop centers of excellence on each campus, exploiting present strengths in faculty, equipment, location or student interest, and developing new "peaks" as resources permit. At the same time developing certain statewide areas of excellence such as cooperative programs that may be located on an individual campus, yet serve students in the entire system: for example, a center for international education. Within teacher education, maintain the present specialization on all

campuses, expanding the number of programs only to meet new State needs.

C. Facilitate free access of students and faculty to each other and to resources of library, laboratory or courses of instruction on other campuses. The whole state system of colleges should be, in effect, a consortium.

D. Begin planning, with the central office, for the development of alternative career programs, keyed both to the special needs of the region and to the developing of special areas of strength on the campus. The development of these programs requires both vigorous initiative on the part of the campuses, and careful coordination on a statewide basis.

E. Set as a goal, the development of each campus as a comprehensive state college.

2. THE PLANNING AND COORDINATION OF THE COLLEGES, TO CLARIFY THEIR MISSION AND TO COORDINATE THE STATE'S EFFORTS. THIS INVOLVES COORDINATION WITHIN THE SYSTEM OF STATE COLLEGES, AND EXTERNALLY WITHIN THE COMMUNITY COLLEGE AND UNIVERSITY SYSTEM.

A. Continue and extend support to the office of the Provost, so that the Board of State Colleges may have the data, the staff work, the professional recommendations on which to base decisions and discharge its responsibility.

B. Clarify the functions of the colleges and the system. This is a leadership responsibility on both sides. Conferences of the Council of Presidents with the Provost should aim toward a sense of system, in which the representatives of the campuses participate in the joint development of a program and proposed policy. Coordination of efforts enables each college to attain individual distinction as part of a system.

C. Develop a data system for the state colleges, as a part of a statewide system for all of higher education. Statistics now are not coordinated, dependable, nor comparable.

D. Define and develop differentiation of function among the colleges. The development of different specializations among the colleges broadens the total offerings and deepens the resources for instruction in each field. This differentiation may be in program specialization or in college organization. For example, within the context of the statewide master plan for higher education, the decision might be reached to develop two campuses as predominantly upper-division state colleges. While, on the basis of number of applications relative to capacity, these two might be Salem and Bridgewater, it is probable that investigation and discussion would result in retaining Bridgewater in its present form and in designating the new state college to be developed in suburban Boston as the second of the upper-division institutions.

E. Develop on a statewide basis, with the Chancellor and the Board of Higher Education, the concept of new student bodies, groups not now served, whose needs should be met by new program content or organization. While this is primarily a responsibility of the Board of Higher Education, the state colleges have an important role, especially in the implementation of the "open university."

F. Present the case for the state colleges to the Legislature, through the Board of Higher Education and the new Secretary of Education, acting for the Governor. If the central office is to serve this significant coordinating function, recognition is imperative by the colleges and the Legislature that the Provost and the Board of Trustees of State Colleges do indeed represent all the state colleges. This shift in function does not exclude the campus president from budget activities even after his own campus budget has been presented. Legislative leaders have a natural special interest in the state institutions in their own districts. The campus presidents have good reason to inform and cultivate this special interest. These proper channels can be utilized to inform legislators and win needed support for the whole statewide program of the state colleges, rather than on a 'dog eat dog' basis. This clarification of function will both simplify the appropriations process and better enable the president to be the educational leader for his campus.

3. THE CONTINUING EVALUATION OF THE COLLEGES IS ESSENTIAL FOR THE OPERATION, PLANNING AND COORDINATION PROCESSES TO BE SELF CORRECTING IN ITS FORWARD MOVEMENT.

An ongoing institutional research function should be highly developed on a system-wide basis as well as at the individual colleges. This will provide the necessary feedback to the Presidents and the Provost on past performance and will facilitate the development of criteria for the establishment and evaluation of future plans.

4. THE RELATIONSHIP OF THE OFFICE OF THE GOVERNOR AND THE LEGISLATURE TO THE STATE COLLEGES.

We urge that the Governor, through his Secretary of Education, require coordinated planning and budgeting by and on behalf of the state colleges, and support this process by allocation of resources to it. When the colleges' functions are clear, their needs precise, and their presentation coordinated, the Legislature, we are confident, will provide these colleges with the resources they need to serve the Commonwealth.

- - - - - - -

This study has led the staff into many avenues, of finance and student needs, faculty aspirations, public expectations, legislative support, program development, and many others, often only alluded to in this report. The experience has been instructive and often encouraging. The overall impression of the state colleges, individually, and as a system, must be one of able people, earnest effort, and honest aspiration. These are the people's colleges, there is good reason for them, and us, to have pride in their past and faith in their future.

6:15

APPENDIX A
THE INSTRUMENT

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APPENDIX A
THE INSTRUMENT

a) Background

The Institutional Functioning Inventory, the instrument used as a component of the state college study, is a product of the Educational Testing Service (ETS), Institutional Research Program for Higher Education, Princeton, New Jersey. It was developed as a spinoff from an investigation funded by the Kettering Foundation of "the factors in the academic complex that make a few institutions creative, experimental and adaptive while others cling to traditional practices."

The first stage of the study was reported in a book entitled, Dynamics of Academic Reform by J. B. Lon Hefferlin, (Jossey-Bass, 1969). This was basically a study of what constituted institutional vitality. Vitality as defined by Hefferlin is continuous adaptability as measured by changes in curriculum.

Another component of the Kettering Foundation investigation was the combined effort, in 1966-67, of ETS and Earl J. McGrath (then at Teachers College, Columbia University), to devise measures of institutional vitality. A survey was taken and two conferences held to determine what factors would measure institutional vitality. What emerged was a decision to drop the relatively non-measurable idea of vitality in favor of institutional functioning which could be normed and was a relatively non-loaded phrase.

Institutional Functioning Inventory Preliminary Technical Manual (Princeton, N.J.: ETS, 1970), page iii.

Eleven scales of attitudinal measurement serve to determine the level of institutional functioning. The basic norm data consisted of 37 colleges and universities proportionately selected by type of institution and the control body. For detail the reader is referred to the Technical Manual--Institutional Functioning Inventory.

b) Definition of the Scales in the IFI
(from Technical Manual-Institutional Functioning Inventory)

Consisting of 132 multiple-choice items, the IFI yields scores on 11 dimensions or scales, each comprised of 12 items.

(IAE) Intellectual-Aesthetic Extracurriculum

refers to the availability of activities and opportunities for intellectual and aesthetic stimulation outside the classroom. Colleges with high scores are characterized by their deliberate efforts to encourage intellectual and artistic interests through appearances by leading intellectuals, informal discussion groups, student literary productions, art exhibits, musical presentations, and so forth. Low scores would mean a relative absence of extracurricular opportunities of an intellectual and aesthetic nature.

(F) Freedom

has to do with academic freedom for faculty and students as well as freedom in their personal lives for all individuals in the campus community. High scores imply that respondents perceive themselves to be essentially free to discuss topics and organize groups of their own choosing, to invite controversial speakers, and to be relatively free of college restrictions on their personal conduct and activities. Low scores suggest an institution that places many restraints on the academic and personal lives of faculty and students.

(HD) Human Diversity

has to do with the degree to which the faculty and student body are heterogeneous in their backgrounds and present

attitudes. A high score indicates that the college is viewed as having attracted students and faculty of diverse ethnic and social backgrounds, of diverse political and religious attitudes, and of diverse personal tastes and styles. A low score suggests a campus community that is relatively homogeneous in terms of faculty and student backgrounds and beliefs.

(IS) Concern for Improvement of Society

refers to a desire among people at the institution to apply their knowledge and skills in solving social problems and prompting social change in America. A high score implies that many faculty wish to, and do, consult with governmental agencies on social and economic matters, that programs dealing with contemporary social problems exist on campus, that campus authorities are committed to the view that the institution should be actively engaged in working to improve social conditions. Low scores imply some combination of disinterest, parochialism, or conservatism in relation to the existing American social order.

(UL) Concern for Undergraduate Learning

describes the degree to which the college - in its structure, function, and professional commitment of faculty--emphasizes undergraduate teaching and learning. A high score suggests a faculty generally disposed toward personalized teaching of undergraduates, encouragement of active student involvement in the learning enterprise, and institutional rewards for good teaching. A low score indicates either that

undergraduate instruction stands relatively low as an institutional priority, or else the perception that, for whatever reasons, the quality of teaching at the college is generally somewhat poor.

(DG) Democratic Governance

reflects the extent to which individuals in the campus community who are directly affected by a decision have the opportunity to participate in making the decision. High scores signify extensive and meaningful faculty and student involvement in institutional affairs, decentralized decision making, and shared (horizontal) rather than hierarchical (vertical) organizational arrangements. Low scores suggest authoritarianism-authority and power tightly held, typically by an administrative clique, in a "top-down" administrative framework.

(MLN) Meeting Local Needs

refers to an institutional emphasis on providing educational and cultural opportunities for all adults in the surrounding area, as well as meeting needs for trained manpower on the part of local businesses and government agencies. High scores indicate availability of adult education, job-related, and remedial curricula; operation of job placement and vocational-counseling services; accessibility of the campus to commuters, and so forth. Low scores indicate a low priority, usually reflecting traditional purposes and functions, given to meeting local area needs.

(SP) Self-Study and Planning

has to do with the importance college leaders attach to continuous long-range planning for the total institution, and to institutional research needed in formulating and revising plans. High scores reflect the perception that long-range planning is a high-priority activity for college officials; that a long-range plan for the institution currently either exists, is being developed, or is being reformulated, and that relevant institutional self-studies are periodically conducted. Low scores indicate a perceived lack of systematic long-range planning and pertinent self-study.

(AK) Concern for Advancing Knowledge

reflects the degree to which the institution - in its structure, function, and professional commitment of faculty--emphasized research and scholarship aimed at extending the scope of human knowledge. High scores signify heavy faculty engagement in scientific research, institutional rewards for academic productivity, and high institutional priority for knowledge-producing activities in general. Low scores indicate a low priority, usually reflecting traditional college purposes, given to research and scholarship.

(CI) Concern for Innovation

refers, in its highest form, to an institutionalized commitment to experimentation with new ideas for educational practice. A high score reflects the view that senior

administrators are receptive to new ideas, that people are encouraged to innovate and experiment at all levels, and that significant changes, in the curriculum, for example, have, in fact, been made in recent years. Low scores could imply traditionalism, complacency, or opposition to change in the college community.

(IE) Institutional Esprit

refers to a sense of shared purposes and high morale among faculty and administrators. High scores reflect a feeling of genuine community (as commitment to shared objectives) loyalty to the institution and satisfaction with its work, open and honest communication among faculty and administrators, and respect for the competency of administrative leaders. Low scores suggest antagonism among and between faculty and administrators, low faculty estimate of the worth of the college, and poor morale in general within faculty and administrative ranks.

c) Sample Procedures

ETS supplied the study group with procedures that had been used in other applications of the instrument. A high level of cooperation at a pilot campus allowed a refinement of the techniques; the suggested procedures that were developed were then forwarded to the other campuses.

1) Faculty and Administration:

An attempt was made to obtain a population response from these groups on each campus rather than use an overall sample. The response was more than sufficient to ensure representative responses. Faculty and administrators self-defined their position as to where they felt their major responsibility lay.

2) Students

The procedures used for this group, although different, again resulted in a highly satisfactory sample.

The essence of the instrument requires the respondent to have some relatively high degree of familiarity with the institution. This requirement limited the use of the instrument to upper classmen only. Student response was therefore solicited from only juniors and seniors.

This same requirement of familiarity limited student questions to those that covered only six of the 11 attitudinal scales. This was done because of students' limited contact with certain institutional decision areas. The Questionnaire booklets are arranged so that after the first 72 questions the line "Students: Stop Here" appears.

In consultation with the staff at Educational Testing Services, it was determined the ideal sampling could be accomplished with a response rate of 200 from each campus. While this was ideal, a hundred students' responses still give most adequate data. The weighting of responses by proportion of students represented by each campus was considered, but since each campus was to be analyzed separately, this relative weight would have no impact except on the overall norm. Since the respondents are all students in the system, weighting would not necessarily produce a more accurate sample. Student responses were therefore not weighted.

d) Process

Lists of all juniors and seniors by name were requested from each campus. From these, using random number selection, 150 juniors and 150 seniors were selected from each campus. The lists were returned to the colleges with suggested procedures which covered methods of notification and administration. On one campus a mail follow-up was used to reach required numbers; on another, time limitations forced the study group to be satisfied with 80 student responses.

e) Respondent Profile Description

1) Faculty:

The nine state colleges have approximately 1,861 faculty positions. There were 941 responses returned, approximately 51% of faculty position. This high response rate varied by campus from a low of 43% to an extreme high of 91%. The

variation by colleges is shown in the Sample Summary Table.[1]

2) Administration:

From the 247 administrative positions some 144 responses were received, representing about 58% of administrators. On many campuses, needed administrative positions are budgeted as funded faculty positions. Allowance was made for this where it was known; it is believed, consequently, that the figure of 247 is the most accurate available. The responses by campus are seen on the Sample Survey sheet.

3) Students:

The most complete data on the number of juniors and seniors in the total system were available from fall, 1970 registration data and those were used as the study base. Since we know that attrition takes place during the year and since there are few mid-year entrants, the system figures at the time the IFI was administered were probably somewhat lower. This would make the proportionate representation of our sample somewhat higher than the percentages shown in the survey table as the sample was drawn from January, 1971 to May, 1971. Even so, a 15% sample was obtained with 1,506 students of the 10,166 juniors and seniors registered in fall of 1970 represented.

f) Response Validity:

In any questionnaire there is always a question of how representative the respondents are of the whole population.

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[1]No inferences are possible from the response rate at a particular college, as the cause of variation may be a function of calendar, communication, personality, etc. and should in no way reflect on the institution.

With faculty and administrators, where the attempt was to gain population response rather than sampling, the question is of particular importance. In each case somewhat over 50% responded. Given this type of self selection, are the respondents those with particular problems who saw the instrument as a way of voicing discontent? The academic ranks of those who responded follow:

Rank	Respondents		System	
	N	%	N	%
Instructor	246	26.1	492	26%
Assistant Professor	331	35.2	622	33%
Associate Professor	183	19.4	331	18%
Professor	122	13.0	225	12%
Nonrespondent	59	6.3		
Training School			197	11%

It can be seen that, if the nonrespondents in the sample group and training school numbers for the system are evenly distributed among the ranks, the sample group is a very close approximation of the ranks. Within the sample, rank was found to correlate highly with age and years on the faculty so this close approximation of the ranks satisfied the researcher as to the acceptability of the response group.

For the administrative group no system wide data were available beyond numbers, but here the high response rate of 58% along with the relatively limited data requested make for acceptable responses.

The student response validity is at once easier and more difficult to analyze. An acceptable response rate was obtained from all colleges with an overall response rate of 15% of juniors and seniors. The sample is acceptable since the attempt to obtain a nonstratified random sample of students was accomplished. As might be expected, however, resident students are overrepresented as are female students, due to the fact that residents had easier access to the questionnaire and there are more female residents than males. Small adjustments in the analysis for the appropriate ratios were made where it was deemed critical to the analysis. The response in the overall was highly useful and, from all obvious checks, was valid.

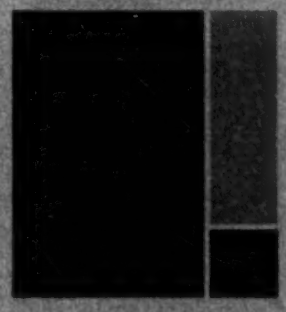
g) Summary

Responses were received from 51% of the faculty at the state colleges. The academic ranks of the respondents were a close match to the proportions that exist in the population. Since age and years on the faculty correlate highly with academic rank, it was felt that the responses represented a valid representation of the faculty.

Fifty-eight percent of the administrators responded. There were few base data available to validate the sample, but the relatively high response rate gave confidence on the response validity.

The student sample was a non-stratified random selection of juniors and seniors. The sample sought was 200 from each

campus or a total of 1800 representing an 18% response rate. 900 would have been satisfactory, a nine percent response. The sample obtained was 1506, or 15%. While slightly biased to favor resident and female respondents, this met requirements.



Institutional Functioning Inventory

PUBLISHED AND DISTRIBUTED
FOR RESEARCH PURPOSES BY
EDUCATIONAL TESTING SERVICE • PRINCETON, NEW JERSEY • BERKELEY, CALIFORNIA

TO THE RESPONDENT:

This is a questionnaire for institutional self-study. In it you will be asked for your perceptions about what your institution is like--administrative policies, teaching practices, types of programs, characteristic attitudes of groups of people, and so forth. This inventory is not a test; the only "right" answers are those which reflect your own perceptions, judgments, and opinions.

Confidentiality of responses can be assured by not giving your name on the answer sheet. Comments and criticisms are invited regarding any aspect of the inventory; space is provided on the back of the answer sheet.

DIRECTIONS:

1. PENCILS. Use any soft lead pencil (preferably No. 2). Do not use an ink or ball-point pen.

2. MARK ONLY ON THE SEPARATE ANSWER SHEET. Please make no marks in the questionnaire booklet, which may be reused.

3. IDENTIFYING QUESTIONS. Fill in the name of your institution on the answer sheet, and then answer the questions printed on the right-hand side of the answer sheet that apply to you, blackening only one answer box for each question.

4. OPTIONAL QUESTIONS A-J. A sheet of additional questions designed to provide information for local research purposes may be enclosed in the questionnaire booklet. If so, mark your answers to these questions in the boxes lettered A through J located in the bottom right-hand corner of the answer sheet.

5. SUBGROUPS. Instructions may be given for gridding the Subgroup item. If not, please leave blank.

6. MARKING YOUR RESPONSES. Sections 1 and 3 consist of statements about policies and programs that may or may not exist at your institution. Indicate whether you know a given situation exists or does not exist by gridding either YES, NO, or ? (DON'T KNOW).

   In Sections 2 and 4, the statements are such that different individuals at the college will have different opinions or judgments. Indicate your opinion by gridding either STRONGLY AGREE, AGREE, DISAGREE, or STRONGLY DISAGREE.

7. STUDENTS. Students should answer only the questions in Section 1 and Section 2 of the inventory (statements 1 through 72).

8. RESPOND TO EVERY QUESTION. Please try to mark an answer for every statement in the inventory (or, for students, in Sections 1 and 2).

9. MARK ONLY ONE ANSWER FOR EACH STATEMENT.

The Institutional Functioning Inventory was developed in collaboration with the Institute for Higher Education, Teachers College, Columbia University, under a grant from the Kettering Foundation.

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SECTION 1

Respond to statements on this page by gridding either:

YES (Y)

If the statement applies or is true at your institution.

NO (N)

If the statement does not apply or is not true at your institution.

DON'T KNOW (?)

If you do not know whether the statement applies or is true.

1. There is a campus art gallery in which traveling exhibits or collections on loan are regularly displayed.
2. There are provisions by which some number of educationally disadvantaged students may be admitted to the institution without meeting the normal entrance requirements.
3. There are programs and/or organizations at this institution which are directly concerned with solving pressing social problems, e.g., race relations, urban blight, rural poverty, etc.
4. A number of professors have been involved in the past few years with economic planning at either the national, regional, or state level.
5. Foreign films are shown regularly on or near campus.
6. There are established procedures by which students may propose new courses.
7. This institution attempts each year to sponsor a rich program of cultural events–lectures, concerts, plays, art exhibits, and the like.
8. There are no written regulations regarding student dress.
9. Professors from this institution have been actively involved in framing state or federal legislation in the areas of health, education, or welfare.
10. A number of nationally known scientists and/or scholars are invited to the campus each year to address student and faculty groups.
11. This institution deliberately seeks to admit a student body in which a variety of attitudes and values will be present.
12. Quite a number of students are associated with organizations that actively seek to reform society in one way or another.
13. When this institution is looking for new faculty, it goes primarily to a few nearby graduate schools.
14. At least one modern dance program has been presented in the past year.
15. Students publish a literary magazine.
16. In the past two years, administrators or the governing board have countermanded one or more invitations from student groups to controversial speakers.
17. Faculty promotion and tenure are based primarily on an estimate of teaching effectiveness.
18. This institution, through the efforts of individuals and/or specially created institutes or centers, is actively engaged in projects aimed at improving the quality of urban life.
19. A concerted effort is made to attract students of diverse ethnic and social backgrounds.
20. At least one chamber music concert has been given within the past year.
21. At least one poetry reading, open to the campus community, has been given within the past year.
22. The institution imposes certain restrictions on off-campus political activities by faculty members.
23. One of the methods used to influence the flavor of the college is to try to select students with fairly similar personality traits.
24. A number of faculty members or administrators from this institution have gone to Washington to participate in planning various New Frontier, Great Society, and subsequent programs.
25. There are a number of student groups that meet regularly to discuss intellectual and/or philosophic topics.

SECTION 2

Respond to statements on this page by gridding either:

STRONGLY AGREE (SA)
If you strongly agree with the statement as applied to your institution.

AGREE (A)
If you mildly agree with the statement as applied to your institution.

DISAGREE (D)
If you mildly disagree with the statement as applied to your institution.

STRONGLY DISAGREE (SD)
If you strongly disagree with the statement as applied to your institution.

26. In general, decision making is decentralized whenever feasible or workable.
27. Many faculty members would welcome the opportunity to participate in laying plans for broad social and economic reforms in American society.
28. This institution tends to attract students from a somewhat restricted range of socioeconomic backgrounds.
29. Meaningful arrangements exist for expression of student opinion regarding institutional policies.
30. An essentially free student newspaper exists on this campus (with accountability mainly to its readership).
31. Little money is generally available for inviting outstanding people to give public lectures.
32. Generally speaking, there is not very much contact between professors and undergraduates outside the classroom.
33. Senior professors seldom teach freshman or sophomore courses.
34. Application of knowledge and talent to the solution of social problems is a mission of this institution that is widely supported by faculty and administrators.
35. A visitor to this campus would most certainly notice the presence of poets, painters, and political activists.
36. In dealing with institutional problems, attempts are generally made to involve interested people without regard to their formal position or hierarchical status.
37. Either tutorials or extensive independent studies are important features of the undergraduate curriculum.
38. This institution tends to be dominated by a single "official" point of view.
39. Religious authority has meant some curtailment of academic freedom for faculty and students.
40. When recruiting new faculty, care is taken to seek candidates with a particular set of personal values.
41. Power here tends to be widely dispersed rather than tightly held.
42. A wide variety of religious backgrounds and beliefs are represented among the *faculty*.
43. A wide variety of religious backgrounds and beliefs are represented in the *student body*.
44. Serious consideration is given to student opinion when policy decisions affecting students are made.
45. How best to communicate knowledge to undergraduates is not a question that seriously concerns a very large proportion of the faculty.
46. In reality, a small group of individuals tends to pretty much run this institution.
47. Certain radical student organizations, such as Students for a Democratic Society, are not, or probably would not be, allowed to organize chapters on this campus.
48. Governance of this institution is clearly in the hands of the administration.
49. Professors get to know most students in their undergraduate classes quite well.
50. In arriving at institutional policies, attempts are generally made to involve all the individuals who will be directly affected.
51. Most faculty members do not wish to spend much time in talking with students about students' personal interests and concerns.
52. The notion of colleges and universities assuming leadership in bringing about social change is not an idea that is or would be particularly popular on this campus.
53. Compared with most other colleges, fewer minority groups are represented on this campus.
54. Certain highly controversial figures in public life are not allowed or probably would not be allowed to address students.

Continue responding to statements on this page by gridding either:
STRONGLY AGREE (SA), AGREE (A), DISAGREE (D), or STRONGLY DISAGREE (SD)

55. Eccentric convictions and unpopular beliefs among faculty members are generally not frowned upon by senior administrators or governing board members.

56. The student newspaper comments regularly on important issues and ideas (in addition to carrying out the more customary tasks of student newspapers).

57. There is wide faculty involvement in important decisions about how the institution is run.

58. Because of the pressure of other commitments, many professors are unable to prepare adequately for their undergraduate courses.

59. Most faculty members are quite sensitive to the interests, needs, and aspirations of undergraduates.

60. Senior administrators generally support (or would support) faculty members who spend time away from the campus consulting with governmental agencies about social, economic, and related matters.

61. Faculty members feel free to express radical political beliefs in their classrooms.

62. Students, faculty and administrators all have opportunities for meaningful involvement in campus governance.

63. In recruiting new faculty members, department chairmen or other administrators generally attach as much importance to demonstrated teaching ability as to potential for scholarly contribution.

64. The governing body (e.g., Board of Trustees) strongly supports the principle of academic freedom for faculty and students to discuss any topic they may choose.

65. Students or faculty members whose records contain suggestions of unusual characteristics–e.g., bizarre dress, unpopular ideas, etc.–are not encouraged to remain here.

66. Many opportunities exist outside the classroom for intellectual and aesthetic self-expression on the part of students.

67. A concept of "shared authority" (by which the faculty and administration arrive at decisions jointly) describes fairly well the system of governance on this campus.

68. Capable undergraduates are encouraged to collaborate with faculty on research projects or to carry out studies of their own.

69. Most faculty on this campus tend to be reasonably satisfied with the status quo of American society.

70. The governing board does not consider active engagement in resolving major social ills to be an appropriate institutional function.

71. Institutional authorities have reprimanded faculty members who have publicly registered their dissent concerning policies of the state or federal government.

72. Idiosyncratic or nonconformist student personal styles and appearances–e.g., beards, long hair–tend to be viewed with disfavor by institutional authorities.

STUDENTS: STOP HERE

SECTION 3

Respond to statements on this page by gridding either:

YES (Y)

If the statement applies or is true at your institution.

NO (N)

If the statement does not apply or is not true at your institution.

DON'T KNOW (?)

If you do not know whether the statement applies or is true.

73. This institution operates an adult education program, e.g., evening courses open to local area residents.

74. Government or foundation research grants comprise a substantial portion of the institution's income.

75. Courses are offered through which local area residents may be retrained or upgraded in their job skills.

76. There is a long-range plan for the institution that is embodied in a written document for distribution throughout the institution.

77. Counseling services are available to adults in the local area seeking information about educational and occupational matters.

78. Reports of various institutional studies are announced generally and made available to the entire teaching and administrative staff.

79. A number of departments frequently hold seminars or colloquia in which a visiting scholar discusses his ideas or research findings.

80. There is a job placement service through which local employers may hire students for full- or part-time work.

81. One or more individuals are presently engaged in long-range financial planning for the total institution.

82. Quite a number of faculty members have had books published in the past two or three years.

83. Facilities are made available to local groups and organizations for meetings, short courses, clinics, forums, and the like.

84. The institution has a long-range plan based on a reasonably clear statement of goals.

85. There are a number of research professors on campus, i.e., faculty members whose appointments primarily entail research rather than teaching.

86. There are a number of courses or programs that are designed to provide manpower for local area business, industry, or public services.

87. Courses dealing with artistic expression or appreciation are available to all adults in the local area.

88. At the present time, there is greater emphasis on departmental planning than on institution-wide planning.

89. The average teaching load in most departments is eight credit hours or fewer.

90. Faculty promotions generally are based primarily on scholarly publication.

91. The curriculum is deliberately designed to accommodate a great diversity in student ability levels and educational-vocational aspirations.

92. Analyses of the philosophy, purposes, and objectives of the institution are frequently conducted.

93. Planning at this institution is *continuous* rather than one-shot or completely nonexistent.

94. Extensive laboratory facilities exist for research in the natural sciences.

95. Attention is given to maintaining fairly close relationships with businesses and industries in the local area.

SECTION 4

Respond to statements on this page by gridding either:

STRONGLY AGREE (SA)
If you strongly agree with the statement as applied to your institution.

AGREE (A)
If you mildly agree with the statement as applied to your institution.

DISAGREE (D)
If you mildly disagree with the statement as applied to your institution.

STRONGLY DISAGREE (SD)
If you strongly disagree with the statement as applied to your institution.

96. There is a general willingness here to experiment with innovations that have shown promise at other institutions.

97. Most faculty members consider the senior administrators on campus to be able and well-qualified for their positions.

98. In the last few years, there have been a number of major departures from old ways of doing things at this institution.

99. In general, the governing board is committed to the view that advancement of knowledge through research and scholarship is a major institutional purpose.

100. A sense of tradition is so strong that it is difficult to modify established procedures or undertake new programs.

101. High-ranking administrators or department chairmen generally encourage professors to experiment with new courses and teaching methods.

102. Few, if any, of the faculty could be regarded as having national or international reputations for their scientific or scholarly contributions.

103. The change that has taken place at this institution in recent years has been more the result of internal and external *influences* than of institutional *purposes* (and deliberate planning based thereon).

104. Generally speaking, top-level administrators are providing effective educational leadership.

105. It is almost impossible to obtain the necessary financial support to try out a new idea for educational practice.

106. Generally speaking, communication between the faculty and the administration is poor.

107. There have been few significant changes in the overall curriculum in the past five years.

108. Currently there is wide discussion and debate in the campus community about what the institution will or should be seeking to accomplish five to ten years in the future.

109. Professors engaged in research that requires use of a computer have easy access to such equipment.

110. Most administrators and faculty tend to see little real value in data-based institutional self-study.

111. Staff infighting, backbiting, and the like seem to be more the rule than the exception.

112. The institution is currently doing a successful job in achieving its various goals.

113. Proposed curricular changes seem to be accepted or rejected more on the basis of financial considerations than of assumed educational merit.

114. The curriculum committee of the college concerns itself with basic curriculum issues rather than, for example, merely approving or disapproving new courses.

115. One or more important scientific breakthroughs have been achieved at this institution in the past five years.

116. Close personal friendships between administrators and faculty members are quite common.

117. In comparison with most other institutions, faculty turnover here appears to be somewhat high.

118. Almost all ideas for innovations must receive the approval of top-level administrative officials before they can be tried out.

119. There are no courses or programs for students with educational deficiences, i.e., remedial work.

120. This institution would be willing to be among the first to experiment with a novel educational program or method if it appeared promising.

Continue on to next page.

Continue responding to statements on this page by gridding either:

STRONGLY AGREE (SA), AGREE (A), DISAGREE (D), or STRONGLY DISAGREE (SD)

121. Although they may criticize certain practices, most faculty seem to be very loyal to the institution.

122. There is a strong sense of community, a feeling of shared interests and purposes, on this campus.

123. In general, faculty morale is high.

124. There is an air of complacency among many of the staff, a general feeling that most things at the college are all right as they are.

125. There is an institutional research agency at this institution which does more than simply gather facts for the administration.

126. The faculty in general is strongly committed to the acknowledged purposes and ideals of the institution.

127. In my experience it has not been easy for new ideas about educational practice to receive a hearing.

128. The location of this campus makes it easily accessible to students who live at home and commute.

129. Senior administrators do not consider advancement of knowledge through research to be an important institutional purpose.

130. This institution considers its most valuable service to lie in educating the upper ten percent or so of secondary school graduates.

131. Most faculty would not defend the institution against criticisms from outsiders.

132. Laying plans for the future of the institution is a high priority activity for many senior administrators.

Comments and criticisms regarding any aspect of the inventory are welcomed; space is provided on the back of the answer sheet.

IFI

PLEASE WRITE NAME OF INSTITUTION ONLY IN UPPER LEFT OF ANSWER SHEET

PLEASE READ INSTRUCTIONS ON PAGE 1 OF THE TEST BOOKLET, THIS INSERT CONTAINS THE ADDITIONAL ("OPTIONAL") QUESTIONS MENTIONED IN DIRECTION #4

When you have completed your responses to the booklet questions and the additional questions please return separately:

a. Your answer sheet: if envelopes have been provided please seal only the answer sheet in the envelope.

b. Your booklet and additional questions.

If you would like to comment on your institution, there is space provided on the back of the answer sheet.

ADDITIONAL QUESTIONS

If you responded to information ITEM I as

Faculty Member - please answer questions on pages a & b

Student - please answer questions on pages c,d,&e

Administrator - please answer questions on page f

ADDITIONAL QUESTIONS - FACULTY MEMBER

If you responded on I.F.I. answer sheet to Question I of Information items as FACULTY MEMBER please respond to the following:

Make responses in the lower right hand corner of the answer sheet in the columns headed A through J.

RESPOND BY GRIDDING THE NUMBER BESIDE THE APPROPRIATE ANSWER

A. Over the past three years how many books or articles have you published?

1. 0-2
2. 3-5
3. 6-10
4. 11-15
5. Over 15

B. The majority of my publications have

1. dealt with the teaching of my discipline
2. dealt with content of my discipline

C. My regular credit hour teaching load is

1. Three or fewer credit hours
2. Four to six
3. Seven to nine
4. Ten to 12
5. 13 or more credit hours

D. My extension credit hour teaching load is

1. Three or fewer credit hours
2. Four to six
3. Seven to nine
4. Ten to 12
5. 13 or more credit hours

E. My largest number of students per class is

1. under 50
2. 51-75
3. 76-100
4. 101-150
5. 150-200
6. 201-250
7. over 250

F. My smallest number of students per class is

1. 1-10
2. 11-20
3. 21-30
4. 31-40
5. 41-50
6. 51-60
7. Over 70

G. My regular teaching load primarily consists of

1. Freshmen and Sophomores
2. Sophomores and Juniors
3. Juniors and Seniors
4. Graduate Students

H. The field of my highest degree is

1. Biological Sciences
2. Physical Sciences
3. Mathematics
4. Social Sciences
5. Humanities
6. Fine Arts, Performing Arts
7. Education
8. Business
9. Engineering
10. Other

I. I hold a degree from a State College in Massachusetts

1. Yes
2. No

J. Sex

1. Male
2. Female

PLEASE BE SURE YOU HAVE GRIDDED
YOUR ANSWER ON THE ANSWER SHEET

TURN TO QUESTION I IN IFI BOOKLET

ADDITIONAL QUESTIONS - STUDENTS

If you responded on I.F.I. answer sheet to Question I of Information Items as STUDENT please respond to the following:

Make responses in the lower right hand corner in the columns headed A through H.

PLEASE RESPOND BY GRIDDING THE NUMBER BESIDE THE APPROPRIATE ANSWER

A. What is your class?

1. Freshman
2. Sophomore
3. Junior
4. Senior
5. Other

B. I am

1. a commuter student (i.e., live with my family)
2. a resident student (i.e., live on or near campus

C. Sex

1. Male
2. Female

D. Which of the following categories comes closest to your father's occupation? If your father is retired, deceased, or unemployed, indicate his former or customary occupation. (Mark only one)*

1. Unskilled worker, laborer, farm worker
2. Semiskilled worker (e.g. machine operator)
3. Service worker (policeman, fireman, barber, military noncommissioned officer, etc.)
4. Skilled worker or craftsman (carpenter, electrician, plumber, etc.)
5. Salesman, bookkeeper, secretary, office worker, etc.
6. Owner, manager, partner of a small business; lower level governmental official, military commissioned officer.
7. Profession requiring a bachelor's degree (engineer, elementary or secondary teacher, etc.)
8. Owner, high-level executive - large business or high-level government agency
9. Professional requiring an advanced degree (doctor, lawyer, college professor, etc.)

E. What is your best estimate of the total income last year of your parental family (not your own family if you are married)? Consider annual income from all sources before taxes.*

1. Less than $4,000
2. $4,000 to $5,999
3. $6,000 to $7,999
4. $8,000 to $9,999
5. $10,000 to $13,999
6. $14,000 to $19,999
7. $20,000 to $25,999
8. $26,000 to $31,999
9. Over $32,000

F. How much formal education does (did) your father have? Indicate only the highest level (i.e. mark only one of the nine alternatives).*

1. No formal schooling or some grade school only
2. Finished grade school
3. Some high (secondary) school
4. Finished high school
5. Business or trade school
6. Some college
7. Finished college (four years)
8. Attended graduate or professional school (e.g., law or medical school) but did not attain a graduate or professional degree
9. Attained a graduate or professional degree (e.g., MA, PhD, MD)

G. Indicate the extent of your mother's formal education. Use the alternatives in the preceding question. (Mark only one)*

H.

1. I began my college career at this college

I transferred here from

2. a community college in Massachusetts
3. a community college in another state
4. a two-year private Massachusetts college
5. a two-year private college in another state
6. a four-year college in Massachusetts
7. a four-year college in another state
8. Other

* Questions used with permission from ETS from the CSQ Questionnaire

PLEASE BE SURE YOU HAVE GRIDDED
YOUR ANSWER ON THE ANSWER SHEET

TURN TO QUESTION I IN IFI BOOKLET

-e-

ADDITIONAL QUESTIONS - ADMINISTRATORS

If you responded on I.F.I. answer sheet to Question I of Information Items as ADMINISTRATION, on information section of answer sheet please complete item V. If you also hold Faculty rank, complete other applicable items. Please respond to the following questions:

Make responses in the lower right hand corner in the columns headed A and B.

RESPOND BY GRIDDING THE NUMBER BESIDE THE APPROPRIATE ANSWER

A. Sex

1. Male
2. Female

B. My administrative responsibilities are primarily for

1. Academic matters
2. Non-academic matters

PLEASE BE SURE YOU HAVE GRIDDED
YOUR ANSWER ON THE ANSWER SHEET

TURN TO QUESTION I IN IFI BOOKLET

INSTITUTIONAL FUNCTIONING INVENTORY

INSTITUTIONAL RESEARCH PROGRAM FOR HIGHER EDUCATION

INSTRUCTIONS:

- **FACULTY, ADMINISTRATORS, GOVERNING BOARD MEMBERS AND OTHER NON-STUDENTS:** respond to the Information Items and all four sections of the Inventory.
- **STUDENTS:** respond to the Information Items and Sections 1 and 2 of the Inventory.

1. MARK ONLY ONE ANSWER TO EACH STATEMENT, OMITTING THOSE STATEMENTS WHICH CLEARLY DO NOT APPLY TO YOUR INSTITUTION.
2. USE ANY TYPE OF SOFT LEAD PENCIL (PREFERABLY #2). DO NOT USE AN INK OR BALL-POINT PEN.

INFORMATION ITEMS:

ALL RESPONDENTS SHOULD ANSWER ITEM I AND EACH OF THE ITEMS II-VI THAT APPLY.

I. All respondents: mark the one that best describes your role.

- Faculty member
- Student
- Administrator
- Governing board member
- Other Non-student: _____

II. Faculty and students:

Faculty–indicate field of teaching and/or research interest. Mark only one.

Students–indicate major field of study. Mark only one.

- Biological Sciences
- Physical Sciences
- Mathematics
- Social Sciences
- Humanities
- Fine Arts, Performing Arts
- Education
- Business
- Engineering
- Other

III. All respondents: indicate age at last birthday.

- Under 30
- 30 to 39
- 40 to 49
- 50 to 59
- 60 or Older

IV. Faculty: indicate credit hour teaching load this term.

- Three or fewer credit hours
- Four to six
- Seven to nine
- Ten to 12
- 13 or more credit hours

V. Faculty: indicate number of years on the faculty of this college.

- Less than one year
- One or two years
- Three to six
- Seven to 12
- More than 12 years

VI. Faculty: indicate academic rank.

- Instructor
- Assistant professor
- Associate professor
- Professor
- Other

Subgroups: One, Two, Three, Four, Five

YOUR NAME _____ (OPTIONAL)

NAME OF INSTITUTION _____ (PRINT)

ADDRESS _____ (PRINT) CITY _____ STATE _____

ALL RESPONDENTS ANSWER
SECTION 1

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ALL RESPONDENTS ANSWER
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ALL RESPONDENTS EXCEPT STUDENTS ANSWER
SECTION 3

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ALL RESPONDENTS EXCEPT STUDENTS ANSWER
SECTION 4

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	SA	A	D	SD
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Princeton, N. J. 08540

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COMMENTS

APPENDIX B

Projected Enrollment in Massachusetts State Colleges and Projected Supply and Demand of Teachers in Massachusetts

Projected Enrollment

Two studies have served as the primary sources of the data which are reported here: Higher Education: Enrollment Study for Massachusetts - A Comparison of Institutional Estimates and Projected Enrollment Trends for 1969 - 1975 - 1980 (Massachusetts Board of Higher Education, January 1969); and Massachusetts Higher Education Profile - An Overview of Characteristics, Enrollment Trends and Facilities (Massachusetts Board of Higher Education, 1970). Enrollment Study (1969) has provided the information on total enrollment, day and evening, graduate and undergraduate, full- and part-time. Some of these projections, however, were incomplete, particularly with regard to evening colleges. More recent data provided orally by the Board of Higher Education made possible a more complete estimate. The source of these more recent data is the consultant who prepared the Profile (1970).

To obtain the enrollment projections for full-time, undergraduate, day students (FDU), these more recent data were multiplied by a percentage figure supplied orally by the Board of Higher Education for each school. These percentage figures represented that part of the 1970-71 enrollment at each school which were FDU. The assumption is that the percentage will remain somewhat the same for 1975 and 1980.

TABLE B-1

INSTITUTIONAL EXPECTATIONS OF
FULL-TIME, DAY UNDERGRADUATE (FDU) ENROLLMENT

State College	1969-70	1975-76	1980-81
Boston State (.64)*	5,088	6,240	8,672
Bridgewater (.52)	3,357	6,006	6,292
Fitchburg (.52)	2,548	3,328	4,472
Framingham (.51)	1,701	2,191	2,614
Lowell State (1.00)	2,310	4,000	7,250
Mass. Col. of A. (.77)	646	1,293	2,239
Maritime Acad. (1.00)	225	816	816
North Adams (.62)	682	1,302	1,798
Salem State (.63)	4,242	5,273	7,875
Westfield (.60)	2,040	3,790	5,980
Worcester (.72)	2,196	3,060	3,780
TOTAL	25,035	37,299	51,688

*The figures in parentheses represent the percentages used to refine the projections contained in Higher Education Enrollment Study for Massachusetts (1969), page 44. The percentage was obtained orally from the Board of Higher Education and represents that part of the total 1970-71 enrollment at each institution which is FDU.

TABLE B-2

INSTITUTIONAL EXPECTATIONS
OF ENROLLMENT
(HIGHER EDUCATION)

	Total Mass. Enrollment	Total Public	Total 4-yr. Public	Total State Colleges	FDU State Colleges
1969	290,905	96,535	71,084	40,407	25,035
1975	380,076	158,747	108,305	59,530	37,299
1980	444,215	205,662	141,892	80,967	51,688

Source: Massachusetts Higher Education Profile, for columns 1, 2 and 3; Higher Education Enrollment Study for Massachusetts (1969) for column 4; Table 1 of this report for column 5.

Teacher Supply

Tables B-3 through B-7 contain the data which serve as the base for projecting the future supply of teachers for Massachusetts and the percentage of that supply which the nine state colleges will furnish.

Table B-3 shows the total number of bachelor and master's degree recipients who were certified to teach in 1968, 1969 and 1970. Table B-4 provides figures on the percentage of Massachusetts graduates who actually entered teaching inside and outside the State.

Table B-5 summarizes the data in Table B-4 and provides two key figures for the rest of the report: approximately 63%

of the potential Massachusetts teachers actually enter teaching, and only about 48% of the potential teachers go into teaching in Massachusetts.

Table B-6 capsulizes the supply of potential teachers for 1967-1970, while Table B-7 indicates the portion which each of the nine state colleges provided in 1967.

Dr. William S. Graybeal, Assistant Director of Research at the National Education Association, offered two cautions on the use of the Massachusetts data from the NEA Reports, Teacher Supply and Demand in Public Schools. Not all institutions in the Commonwealth report to the NEA, and secondly, not all those who do report are in a position to provide accurate information. His opinion is that the figures for potential teachers and for the number and percentages of people entering teaching are conservative, minimal estimates. Table B-6 shows, however, that AACTE and NEA estimates tend to agree at least in the area of bachelor degree recipients.

Dr. Graybeal also noted that teacher employment data for 1968 and 1969 may not be reliable indicators of teacher demand. He feels that economic conditions may have forced many school districts to restrict expansion and perhaps even to hold back on necessary replacements.

The percentage of potential teachers, therefore, who actually enter teaching (60.6% in 1968 and 65.3% in 1969) not only are minimal estimates, but also may reflect depressed employment conditions. Should the general economy improve, one could reasonably expect these percentages to rise.

It is also worth noting the reservation which appears in the foreword to the NEA Reports: "Users of this report should interpret the estimates only in general terms..." (Teacher Supply and Demand in Public Schools, p. 4). With these cautions in mind, this paper will use the average of the NEA data for 1968 and 1969: 63% (rounded from 62.9%) for those entering teaching, and 48% (rounded from 48.4%) for those entering teaching in Massachusetts. (See Table B-5).

Student Migration

The matter of student migration patterns is particularly important in Massachusetts. A Fact Book on Higher Education, (American Council on Education: Washington, D.C., 1970) shows that Massachustts has the largest excess of in-migrants over out-migrants. In 1968 the excess was 25,311 (Fact Book, p. 70, 176). The next three areas behind Massachusetts were North Carolina (20,195), Washington, D.C. (18,989), and Tennessee (18,009).

Since, however, the public sector in Massachusetts, by institutional agreement, limits the number of non-resident enrollments to five percent, in-migration can be expected to affect the non-public sector to the greater extent.

In 1968-69, for example, of the 274,000 students enrolled in higher education in Massachusetts, 32% or approximately 87,700 were in the public sector. (McKinsey & Co., Inc., Financial

Problems of Massachusetts Private Higher Education, 1969, p. 1-4; McKinsey's sources for these figures of 274,000 are McKinsey Survey of Private Institutions of Higher Education in Massachusetts and Opening Fall Enrollment in Higher Education, U.S. Office of Education. The figure is for total enrollment and excludes extension students.) McKinsey found that 190,000 of these 274,000 students were Masaachusetts residents. Of these 190,000 residents, McKinsey estimated that 44% or about 83,600 were in the public sector. Of a total of 87,700 in the public sector, therefore, 83,600 were Massachusetts residents, and about 4,100 were from out of state.

The non-public sector shows the impact of in-migration. Of the total 274,000 students, about 186,300 (68%) were in the non-public sector. McKinsey reported that only 106,400 (57%) of these students were from Massachusetts; about 79,900 students in non-public higher education in 1968-69, therefore, were not residents of Massachusetts (Financial Problems, p. 1-3). All in all, Massachusetts residents constitute about 70% (69.34%) of those enrolled in higher education in the Commonwealth.

McKinsey also notes that the percentage of bachelor degrees granted parallels the overall enrollment distribution. In 1968-9 non-public institutions in Massachusetts granted about 70% of the bachelor degrees (19,600) while the public sector awarded about 30% (8,300) (Financial Problems, p. 1-6).

It seems reasonable to assume, therefore, that out-migration would affect graduates of the non-public schools more significantly than those of the public institutions. One might expect, consequently, that potential teachers graduating from Massachusetts state colleges would tend to teach in the Commonwealth if anywhere.

If such an expectation were valid, one might take the McKinsey percentages for Massachusetts residents and apply them to the AACTE data found in Tables B-6 and B-7. The following would result. The total number of bachelor degree recipients eligible for certification who graduated from the nine state colleges in 1967 was 2885. If 95% were Massachusetts residents, then 2741 potential teachers graduated from the state system and were from the Commonwealth. Of the remaining 2545 potential teachers from the non-public sector (5,430 - 2,885 = 2,545) 1,450 (57%) would be residents, and 1,095 would be from out of state. This would make for a total of about 4,190 potential teachers (bachelor degree recipients eligible for certification) graduating from public and non-public institutions in Massachusetts in 1967 who were residents of the State.

Interestingly, 4,190 is approximately 77% of 5,430. While Massachusetts residents constitute about 70% of the total enrollment they account for 77% of the potential teachers. Apparently, therefore, a smaller percentage of in-migrants are interested in teacher preparation at Massachusetts institutions.

Consequently, out-migration of graduates might be expected to affect new teachers to an equally smaller degree.

Although it is equally difficult to estimate what percentage of student out-migrants will return to teach in Massachusetts after graduation, a view of the general picture might be valuable. In 1968, Massachusetts had an excess of in-migrants over out-migrants of 25,311 (Fact Book, p. 70, 176). That same year, 79,900 students in the non-public sector and 4,100 in the public sector were from outside Massachusetts (McKinsey, p. 1-3). If 25,300 more students entered the State than left it, then almost 58,700 Massachusetts residents were attending colleges outside the State in 1968. How many of these were potential teachers? How many actually took up teaching in Massachusetts? Since no data are available to provide answers for these questions, it is impossible accurately to assess the impact of migration on percentages of graduates entering teaching. We might reasonably expect that the majority of Massachusetts residents would feel inclined to teach in the State. It is suspected, therefore, but not demonstrable, that the percentage of Massachusetts residents who enter teaching in the Commonwealth is more than 48%. In projecting the future teacher supply from the state colleges, therefore, we will use 48% as the lower limit and 63% as the upper, more optimistic estimate.

TABLE B-3

NUMBER OF COLLEGE STUDENTS RECEIVING DEGREES AND PREPARATION
TO TEACH IN ELEMENTARY AND SECONDARY SCHOOLS, 1968, 1969, 1970

Bachelor and Masters Combined				
1968 Total	1969 Total	% Change	1970 Total	% Change
6,674*	7,754*	+16.2	8,645**	+11.5

*Source: Teacher Supply and Demand in Public Schools - 1969. Research Division, National Education Association, Washington, D.C., p. 18.

**Teacher Supply and Demand in Public Schools - 1970, Research Division, National Education Association, Washington, D.C., p. 18. The figures for 1969 were taken from the 1970 Report. The 1969 Report showed the 1969 total as 7,959; the 1970 Report corrected it to 7,754. Since the data for 1969 were reported to NEA in the summer of 1969, they may not have been accurate. The 1970 figure, therefore, may also need correcting when the next Report appears.

TABLE B-4

LOCATION OF PERSONS WHO WERE GRADUATED FROM MASSACHUSETTS INSTITUTIONS IN 1968 AND 1969 WITH QUALIFICATIONS FOR CERTIFICATION

	Elementary				Secondary			
	Number	% Teaching In Mass.	% Teaching Outside Mass.	Total % Teaching	Number	% Teaching In Mass.	% Teaching Outside Mass.	Total % Teaching
1968*	3,099	51.3%	17.4%	68.7%	3,063	40.2%	12.3%	52.5%
1969**	2,988	59.4%	15.6%	75.0%	2,878	42.3%	13.1%	55.4%

*Source: Teacher Supply and Demand in Public Schools - 1969, p. 26.

**Source: Teacher Supply and Demand in Public Schools - 1970, p. 27.

TABLE B-5

PERCENTAGE AND LOCATION OF PEOPLE WHO GRADUATED FROM MASSACHUSETTS INSTITUTIONS AND ENTERED TEACHING IN 1968 AND 1969

1968 Total	Total Entering Teaching	% Entering Teaching	Total Entering Teaching in Mass.	% Entering Teaching in Mass.
6162	3737	60.6%	2821	45.7%
1969 Total				
5866	3835	65.3%	2992	51.0%
Average of 1968 and 1969		63% (62.9%)		48% (48.4%)

TABLE B-6

TEACHER SUPPLY FOR MASSACHUSETTS, 1967 - 1970

	Bachelor Degrees	Master and Bachelor Degrees
1967 (AACTE)*	5430	7332
1968 (NEA)**	6141	6674
1969 (NEA)***	6900	7754
1970 (NEA)***	7467	8654

*Teacher Productivity - 1967: American Association of Colleges for Teacher Education: Washington, D.C., 1967, p. 37. (The figures for Bridgewater had not been available at the time of printing. The figures of 508 Bachelors and 115 Masters degrees (623 total) were obtained by telephone from AACTE offices in Washington and added to the data contained in the book.

**Teacher Supply and Demand - 1969, pp. 18, 19, 20.

***Teacher Supply and Demand - 1970, pp. 18, 19, 20.

TABLE B-7

POTENTIAL TEACHERS FROM MASSACHUSETTS STATE COLLEGES - 1967*

	Bachelor Degree	Total Bachelor and Masters
Boston	477	543
Bridgewater	508	623
Fitchburg	218	218
Framingham	190	212
Lowell	199	199
North Adams	93	103
Salem	771	789
Westfield	200	235
Worcester	229	229
Total	2,885	3,151

*Source: Teacher Productivity - 1967. AACTE, pp. 35-37. Subsequent data not available from AACTE.

Demand for Teachers

Some important but slightly dated statistics on the demand for teachers in Massachusetts are contained in a study entitled Teacher Certification and Preparation in Massachusetts: Status, Problems and Proposed Solutions, Report Number 1 (Massachusetts Advisory Council on Education, June, 1968). The study, under Dr. Lindley J. Stiles as Director, reported that more than 25 percent of elementary and secondary teachers are from outside Massachusetts; at the secondary level it is almost 35 percent. As Dr. Stiles notes:

> Over one-third of the superintendents of schools and senior high school principals are prepared in other states. Twenty-seven percent of junior high school principals and seventeen percent of elementary school principals are outsiders by origin. Over half the heads of departments in secondary schools have been recruited from other states as have more than sixty percent of the curriculum specialists and about twenty-five percent of the guidance counselors (Stiles, 1968, pp. 29-30).

In the matter of loss of teachers, the report indicates that the Massachusetts pattern approximates the national norm. In general terms, the Massachusetts pattern would be as follows:

> Out of every ten new teachers employed, six will have left teaching by the end of five years. Of the remaining four, two will have moved one or more times to different school systems. One of these four eventually will move out of the classroom into other types of educational work while another may drop out of teaching. This means that only two of the ten originally employed are likely to continue as classroom teachers for as long as ten years or so. Of those who drop out, however, one or two may re-enter teaching for periods of time. (Stiles, 1968, pp. 31-32).

The data on the sources of Massachusetts teachers are also significant:

> With respect to the types of institutions, regardless of location, preparing educational personnel employed in Massachusetts, non-public colleges and universities carry a heavy responsibility. About thirty-eight percent of elementary teachers were trained in non-public institutions which compares to about fifty percent who are products of the state colleges. Twelve percent attended other types of public institutions. Over fifty-five percent of the state's secondary school teachers come from non-public colleges and universities; while almost a third are produced by the state colleges, about eleven percent graduated from other public institutions. (Stiles, 1968, p. 30).

The future need for teachers is closely knit with a number of complex factors: the need to maintain and increase the quality of education; the need to correct understaffing of schools; expansion of educational services; enrollment increases; teacher turnover; economic conditions.

Acknowledging this complexity, Dr. Stiles constructed the following table (Table B-8), based primarily on the formula of the Willis-Harrington Commission, adopted by the Massachusetts Board of Education, of 40 teachers and 10 non-classroom personnel per 1,000 students in elementary schools, and 60 teachers and 15 non-classroom personnel in secondary schools. The Stiles study urged flexibility in following the formula, noting, for example, that curriculum innovations and experimentations or classes for handicapped children would require different teacher-pupil ratios.

TABLE B-8

EDUCATIONAL PERSONNEL NEEDED IN MASSACHUSETTS
UNDER PRESENT STAFFING PATTERNS

Type	Needed - 1967-68	and Future Needs		
	Certified or Judged Qualified*	Deficit by**	New Personnel Needed Annually***	Total Number in ten years
	(----------Classroom Personnel Only---------)			Includes non-classroom personnel
Elementary Schools:				
Public School teachers	22,513	2,047	6,160	27,020
Public School non-classroom				6,200
Non-Public School teachers	5,715	760	1,375	7,285
Non-Public School non-classroom				1,925
Secondary Schools:				
Public School teachers	20,228	6,412	5,588	32,640
Public School non-classroom				6,725
Non-Public School Teachers	4,064	136	855	5,055
Non-Public School non-classroom				1,060
Totals for Massachusetts	52,520	9,357	13,978	87,910

*Estimated 90% of those presently employed

**Staffing formula: Elementary schools: 40 teachers and 10 non-classroom professionals per 1,000 pupils
Secondary schools: 60 teachers and 15 non-classroom professionals per 1,000 pupils

***Estimated 20% needed annually to replace those retiring or leaving teaching positions in Massachusetts and 1% additional personnel to provide for enrollment increases

Source: Teacher Certification and Preparation in Massachusetts, Massachusetts Advisory Council on Education, 1968, pp. 34-35.

To follow the formula in staffing the schools in 1967-68 with certified or qualified teachers, the Stiles study calculated that the state needed an additional 9,357 teachers. Properly to staff the schools in 1977-78 the report projected that Massachusetts would require approximately 14,000 new teachers annually, not counting the numbers required to make up the deficit for 1967-68.

Applying the information on sources of Massachusetts teachers to the data in Table B-1, we come up with the following statistics for Massachusetts for 1967-68.

50% of the 28,228 elementary teachers were from state colleges regardless of location.....14,114

33% of the 24,292 secondary school teachers were from state colleges regardless of location.... 8,097

TOTAL from state colleges regardless of location.....22,211

Of the 52,520 teachers in Massachusetts in 1967-68, 22,211 or 42% were from state colleges regardless of location. Table B-9 summarizes the data on the educational origin of Massachusetts teachers.

TABLE B-9

EDUCATIONAL ORIGIN OF MASSACHUSETTS TEACHERS - 1967-68

46% were from non-public institutions regardless of location
42% were from state colleges regardless of location
12% were from other public institutions regardless of location

No accurate data are available on what percentage of new teachers graduating from Massachusetts state colleges enter teaching in the Commonwealth. The section on Teacher Supply indicated that the range might be between 48% and 63%. The net effect over the course of years, however, is that they comprise less than 42%, since this percentage includes graduates from state colleges outside Massachusetts.

If, however, the nine state colleges were to attempt to supply 42% of the required Massachusetts teachers each year, when would they be able to do so? (14,000 x 42% = 5,900).

In January 1971, the Division of State Colleges of Massachusetts completed a study of the number of students in the state college system planning to become teachers. The study revealed that 73% of all students intended to become teachers. The figures for juniors and seniors, however, were more impressive; an average of 81% expressed intentions to enter teaching. Since some of the state colleges do not require students to choose a major until junior year, this figure of 81% (rounded to 80%) may be a more accurate indicator of career choices. It also reveals that, far from becoming liberal arts colleges, the state colleges are still, to a high degree, teacher preparation institutions.

Using the estimates for future undergraduate enrollment in the state colleges, (see section "Enrollment Projections"), we project that these institutions will graduate about 5,600 teachers with bachelor degrees in 1975, and about 7,680 in 1980. These projections are based on the following data.

TABLE B-10

PROJECTED ENROLLMENT AND POTENTIAL TEACHER SUPPLY
MASSACHUSETTS STATE COLLEGES
(Bachelor Degrees)

Projected enrollment for 1975	35,000
Projected number of seniors in 1975 (20% of above)	7,000
Projected number of potential teachers (80% of above)	5,600
Projected enrollment for 1980	48,000
Projected number of seniors in 1980 (20% of above)	9,600
Projected number of potential teachers (80% of above)	7,680

As noted earlier, the percentage of potential teachers who graduate from the Massachusetts state colleges and who actually enter teaching in Massachusetts may range between 48% and 63%.

If 48% entered teaching, then the Massachusetts state colleges would graduate about 2,690 people with bachelor degrees who actually entered the classroom in Massachusetts in 1975 and about 3,690 in 1980. (48% x 5,600 = 2,688; 48% x 7,680 = 3,686).

If 63% entered teaching, then the supply would be about 3,530 in 1975 and about 4,840 in 1980 (63% x 5,600 = 3,528; 63% x 7,680 = 4,838).

To supply 42% of the 14,000 teachers needed annually, the Massachusetts state colleges would have to graduate 5,900 people who actually entered teaching. The AACTE Report, Teacher Productivity - 1967, indicated that the nine state colleges expected to graduate a total of 3,151 people eligible for certification (bachelor and master's degrees combined). (See Tables B-6 and B-7). This was 42.9% of the Massachusetts total of 7,332. Bachelor degree recipients from the Massachusetts state colleges accounted for 40.7% of the total of 7,332 and 91.5% of the total of 3,151 produced by the state colleges. If the state colleges were to produce 5,900 actual teachers each year, then the bachelor degree recipients from the state colleges would have to number 5,402. (5,900 x 91.5% = 5,402).

If all the potential teachers with bachelor degrees from the nine state colleges actually entered teaching in Massachusetts, then by 1975 the supply (5,600) would exceed the demand (5,402). If 63% of the potential teachers with bachelor degrees actually began teaching in the Commonwealth, then by 1980 the supply (4,840) would still not satisfy the demand (5,402). If 48% actually began teaching, then by 1980 the supply (3,690) would satisfy the demand (5,402) even less.

Conclusions

The data do not allow for any firm conclusions to be drawn. A clear need, however, does appear: accurate and extensive information on teacher productivity in Massachusetts must be collected and communicated.

In a more particular matter, the Massachusetts state colleges could decide on what portion of the projected teacher need they intend to satisfy. For this paper we have chosen 42%. That was generous; we are unable to tell just how generous it was, however, and to that extent, our predictions lack sharpness.

Our feeling is, however, that the state colleges will begin to overproduce teachers near the end of this decade. These institutions, therefore, should begin curtailing their teacher preparation programs in the mid-70's. To determine a date and a degree of curtailment requires more precise data than is presently available.

APPENDIX C

SUMMARY - TOTAL SAMPLE

	Students				Faculty				Administrators			
	Sample		Jr. & Sr. System		Sample		System		Sample		System	
	N	% of Jr. & Sr.	N of System	%	N	% of Faculty	N of System	%	N	% of Administrators	N of System	%
Total	1506	15.	10,166	100.	941	51.	1861	100.	144	58.	247	100.

SAMPLE BY COLLEGE

	N	% of Total Sample	No. at Instit.	% of Institution Represented by Sample	N	% of Total Sample	No. at Instit.	% of Institution Represented by Sample	N	% of Total Sample	No. at Instit.	% of Institution Represented by Sample
Boston	205	13.6	2,107	10	146	13.6	339	43	15	10.9	33	45
Bridgewater	192	12.7	1,371	7.1	196	12.7	215	91	16	11.1	35	46
Fitchburg	80	5.3	946	8	105	5.3	188	56	20	13.9	22	91
Framingham	168	11.2	879	19	102	11.2	127	80	16	11.1	27	59
Lowell	144	9.6	832	17	125	9.6	141	87	12	8.3	18	67
North Adams	127	8.4	463	27	27	8.4	65	42	8	5.6	17	47
Salem	184	12.2	1902	10	149	12.2	248	60	34	23.6	50	68
Westfield	204	13.5	959	20	77	13.5	138	56	9	6.2	23	39
Worcester	202	13.4	1005	20	114	13.4	168	68	14	9.7	20	70

APPENDIX D

Massachusetts State College System
Degree Programs
December 1970

	BOSTON	BRIDGEWATER	FITCHBURG	FRAMINGHAM	LOWELL	No. ADAMS	SALEM	WESTFIELD	WORCESTER	MASS ART	MASS MARITIME
Anthropology		BA									
Art Education (Fine)				BA				BA		BS/MS	
Biology	BS/BA	BA	BS(Ed.)/BA	BA	BA/BS	BA	BA	BS	BA		
Black Studies	BS/BA										
Business Administration						BS	BS				
Business Education											
Chemistry - Geology		BA									
Chemistry	BS/BA	BA	BS(Ed.)/BA	BA		BA	BA		BA		
Design (3-Dimensional)										BFA	
Earth Sciences	BS/BA	BA		BA			BA				
Economics	BS/BA						BA		BA		
Marine Engineering											BS
English	BS/BA	BA	BS(Ed.)/BA	BA	BA	BA	BA	BA	BA		
Environmental Design										BFA	
Fashion Design & Illustration										BFA	
French	BS/BA	BA		BA	BA	BA	BA	BA	BA		
General Science								BS			
Geography	BS/BA	BA	BS(Ed.)	BA					BA		
German	BS/BA										
Graphic Design										BFA	
Health Education											
History	BS/BA	BA	BS(Ed.)/BA	BA	BA	BA	BA	BA	BA		
Home Economics				BS(Ed.)							
Industrial Arts			BS(Ed.)								
Industrial Design										BFA	
Latin American Studies	BS/BA										
Law Enforcement	BS BA							BS			
Marine Transportation											BS
Mathematics	BS/BA	BA	BS (Ed.)	BA	BA	BA	BA	BA	BA		
Medical Technology			BS	BS	BS	BS					
Metropolitan Studies	BS/BA										
Music					BM Ed./BMus.			BA			
Natural Science	BS/BA								BA		
Nursing			BS		BS		BS				
Painting										BFA	
Photography & Film										BFA	
Physical Education (Wm)	BS/BA							BS			
Physical Education (Men)	BS/BA	BS						BS			
Physics	BS/BA	BA	BS(Ed.)/BA			BA			BA		
Philosophy	BS/BA				BA						
Political Science	BS/BA				BA		BA				
Psychology	BS/BA	BA	BS/BA	BA		BA	BA	BA	BA		
Printmaking										BFA	
Special Education		BS	BS(Ed.)					BS (Ed.)			
Sociology		BA			BA				BA		
Social Science								BA			
Social Service							BA/BS				
Spanish	BS/BA			BA				BA	BA		
Speech & Theater		BA									
Education (Early Childhood)	BS (Ed.)	BS		BS (Ed.)		BS	BS (Ed.)	BS (Ed.)	BS (Ed.)		
Education (Elem.)	BS (Ed.)	BS	BS (Ed.)	BS (Ed.)	BA	BS	BS (Ed.)	BS (Ed.)	BS (Ed.)		
Education (Jr. High)							BS (Ed.)				

Source: Division of State Colleges, 1970

MACE PUBLICATIONS*

1971

Massachusetts Study of Educational Opportunities for Handicapped and Disadvantaged Children	Burton Blatt, Frank Garfunkel
Organizing for a Child's Learning Experience: A Report on a Study of School District Organization in Massachusetts	Donald T. Donley
Quality Education for the High Schools in Massachusetts: A Study of the Comprehensive High School in Massachusetts	Lloyd S. Michael

1970

Organizing an Urban School System for Diversity	Joseph M. Cronin
The Massachusetts Department of Education: Proposals for Progress in the 70's	John S. Gibson
Compensatory Education in Massachusetts: An Evaluation with Recommendations	Daniel Jordan, Kathryn H. Spiess
Continuing Education in Massachusetts: State Programs for the Seventies	Melvin Levin, Joseph Slavet
The State Dollar and the Schools: A Discussion of State Aid Programs in Massachusetts and Promising Reform	Charlotte Ryan
Report of the Massachusetts Business Task Force for School Management	Warren King & Associates

1969

A Cost Benefit Analysis of General Purpose State School Aid Formulas in Massachusetts	Andre Daniere
The Measurement of Alternative Costs of Educating Catholic Children in Public Schools	Andre Daniere George Madaus

*Listing is according to year of completion and includes some publications currently out of print.

1969 (Continued)

Guidelines for Planning and Constructing Community Colleges	Bruce Dunsmore
Take a Giant Step: Evaluation of Selected Aspects of Project 750	Herbert Hoffman
Pupil Services for Massachusetts Schools	Gordon Liddle, Arthur Kroll

1968

The Management of Educational Information	Information Management, Inc.
Occupational Education for Massachusetts	Carl Schaefer, Jacob Kaufman
Teacher Certification and Preparation in Massachusetts	Lindley J. Stiles

1967

The Massachusetts System of Higher Education in Transition	Samuel Gove
Inequalities of Educational Opportunity in Massachusetts	New England School Development Council